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ABSTRACT

This report describes the cooperative activities of the New York State Education Department, Cornell Institute for Research and Development, and Riverside Research Institute in a two-phase occupational education development project. (Phase 1 involved the designing, implementing, and evaluating of modularized curriculum for occupational education programs, and phase 2 constituted the design and demonstration of an implementation of the curriculum, i.e., class rosters, roster changes, student records and evaluation, etc., for use in classroom management and curriculum evaluation.) The body of the report describes objectives of the participating agencies, their activities, results of activities, and conclusions. Achievements and conclusions listed include the following: (1) A statewide system for curriculum change in occupational education was developed, (2) technical support was provided to formulate methods and processes for development and implementation of the support system, (3) teacher training with resultant production of modularized curriculum packages in automotive mechanics and office clerical areas occurred as planned and a pilot project was conducted to test the quality and usefulness of the modules, (4) the project was successful in generating teacher enthusiasm and work in organization of curriculum management materials, (5) the most problematic area of development was installation and utilization of the computer retrieval systems tested, so it was concluded that a technical support system should followup rather than parallel curriculum development, and (6) the success of the overall effort was such as to warrant continuation and expansion through a second phase of development currently underway. Appendixes (more than half of the report) contain a guide to the information flow and logistics subsystem used in field testing, sample curriculum modules for automotive mechanics (lubrication service) and office training (mail handling), the ISS terminal manual, and checklists used in the project. (LAS)

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Final Report

Project No. V0212VZ
Grant No. OEG-0-74-1664

COMPREHENSIVE INSTRUCTIONAL MANAGEMENT SYSTEM

FOR OCCUPATIONAL EDUCATION IN NEW YORK STATE

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Albany, New York 12230

October 18, 1976

The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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INTRODUCTION

The Final Report for the Comprehensive Instructional Management System for Occupational Education in New York State covers the grant award period from July 1, 1974 to June 30, 1976. Permission to extend the original expiration date of December 31, 1975 until June of the following year was granted by the Department of Health, Education, and Welfare on November 10, 1975.

Information in this Report concentrates on the principal thrust of the original proposal; namely, the design and demonstration of the effectivness of an Instructional Support System for Occupational Education (ISSOE). The Final Report is an assessment of how this global objective was accomplished. It includes an investigation of the objectives, activities, and results of the major agencies which contracted to achieve this end and delineates their single accomplishments and interactions.

The major agencies engaged in this effort were the New York State Education Department, Cornell Institute for Research and Development in Occupational Education, and the Riverside Research Institute. Overall management of the ISSOE project was the responsibility of the Division of Occupational Education Instruction. The Cornell Research Institute was responsible for developing the statewide system for curriculum change in occupational education. In general, Riverside Research Institute was to provide technical support to the State Education Department in formulating methods and processes for development and implementation of the Support System.

Teacher training with resultant production of modularized curriculum packages occurred as planned and a pilot conducted to test the quality and usefulness of modules produced. The success of this effort has been such as to warrant continuation and expansion through a second phase of development currently underway.

Problematic areas have been defined and addressed in current approaches to improvement. Most troublesome has been implementation of the computerized retrieval system which appears to have been a premature step in terms of developing and changing curriculum tools.

Overall, however, the project has been highly successful in terms of teacher enthusiasm, curriculum change, and new patterns of classroom management which have begun to evolve.

Despite the complexities of establishing statewide, teacher-generated, modularized, performance-based curriculum development, the model tried has proved feasible and worthy of accelerated development.

I. SPECIFIC OBJECTIVES OF PARTICIPATING AGENCIES

State Education Department (SED)	Provide overall management and financial support for the project.
	Conduct research leading to the selection of subject areas for modularized curriculum development.
	Identify and enlist Statewide test sites.
	Solicit, review, and accept work plans from participating agencies relating to their roles and responsibilities in conducting the project.
	Communicate project direction and support knowledge within and outside the State Education Department.
	Prepare proposal for Phase II project development based on an analysis of Phase I progress.
	Assemble and amalgamate reports from participating agencies to comply with Interim and Final Report requirements.
Cornell Institute for Research and Development (CIOE)	Plan and conduct a three-week curriculum workshop in identified vocational subject areas for selected personnel.
	Conduct an evaluation of the delivery system in relation to materials developed during and subsequent to the summer workshop; conduct evaluation of the materials developed in relation to the delivery system and the instructional objectives sought.
	Assist the local education agencies and appropriate State Education Department personnel in planning and conducting a refinement and adjustment of the curriculum modules where necessary.
	Provide a summative evaluation of the project with recommendations of the State Office of Occupational and Continuing Education relative to modifications and/or continuance at the close of the First Phase of the project.
Riverside Research Institute (RRI)	Provide support to the State Education Department for the planning, organization, and coordination of the project.
	Provide support to the State Education Department and Cornell Institute for Occupational Education in the planning and conducting of the summer workshop.
	Plan or requisite activities for the execution of a field test, including the development of a handbook to instruct teachers and administrators in the utilization of the information-handling component of the Instructional Support System for Occupational Education (ISSOE).

Provide computer support for data processing activities associated with the field test.

Assess the feasibility of running ISSOE computer operations at local data processing centers.

Provide technical support to field test participants.

Local and Regional Education Agencies

Appoint regional curriculum coordinating agent to oversee development of project among specified teachers in each district or regional center.

Prepare and submit applications for funding which share common base of objectives and activities designed to achieve them.

Provide time and space for teachers to meet on a regular basis during the year.

Assist teachers in implementing, critiquing and make recommendations regarding modules developed during the summer and school year sessions.

Prepare and make known concerns which develop in regard to the project to appropriate administrative agents in the project.

Utilize workshops set up as training vehicles for the project.

Participate with neighboring districts in regional meetings and in exchange of modules for critique process.

II. AGENCY ACTIVITIES FOSTERING OBJECTIVES

State Education Department

Curriculum Selection

A study of curricular needs together with assessment of enrollments in occupational education in New York State formed the basis for selection of two curriculum cluster areas for development. Automotive Mechanics and Office Clerical were chosen for development on a modularized basis in the first year of the Instructional Support System.

Site Selection

Sites selected for participation in the program and field test components of the pilot project included the following educational agencies which also encompassed neighboring sites:

- Nassau County Board of Cooperative Educational Services
- Orange County Board of Cooperative Educational Services
- Ulster County Board of Cooperative Educational Services
- Monroe #1 Board of Cooperative Educational Services
- Rochester City School District
- Putnam-Westchester Board of Cooperative Educational Services

Funding	Projects from the Cornell Institute for Research and Development in Occupational Education, Riverside Research Institute, and the aforementioned project sites were solicited, reviewed, and funded in accord with common objectives.
Communications Efforts	Representatives of the Division of Occupational Education Instruction and the Bureau of Occupational and Career Education Curriculum Development met inhouse with agency representatives and conducted trips into the field to assess development, clarify objectives, address problems, and exchange information about project activities. Project coordinators and curriculum representatives from the State Education Department attended regular meetings at curriculum development sites for the purpose of observing activities and making recommendations in accord with project guidelines.
General Management	Sustained communications with participating agencies assured that overall management was provided throughout the First Phase of modularized curriculum development. By May of 1976, major problems and principal achievements had been identified and became the basis for preparation of the new proposal designed to launch Phase Two of the Instructional Support System.
Project Evaluation	Submission of reports was requested from participating agencies as part of project agreements. Such reports have been collected and utilized for the Interim Report and serve as the basis of this Final Report on the project.

Cornell Institute for Research and Development

Summer Workshop	A three-week summer workshop was conducted from July 7 to July 25, 1975 at Cornell University. Twenty-seven selected occupational education teachers, administrators, and curriculum coordinators attended representing six school districts. Twelve modules in the area of Automotive Mechanics and thirteen modules in Office Clerical were developed during the summer workshop. Editing of these by the staff at Cornell initiated on July 28. On August 7 and 8, Cornell staff met with Riverside Research staff, Automotive Mechanics teachers, an Office Clerical teacher and a curriculum coordinator in order to finalize the editing of the respective curriculum packages. Printed modules were mailed to local sites for fall implementation on August 25, 1975.

Planning Sessions

Execution of the summer workshop was preceded by two important activities; namely, pre-planning sessions and the orientation of administrative and supervisory personnel.

The May 29, 1975 leaders' meeting is considered the climax of the planning phase of the ISSOE project, although several preliminary contact and negotiations had occurred previous to this date. The Cornell Institute for Research and Development in Occupational Education's completed proposal was sent to the State Education Department on March 31, 1975.

The objectives of the May 29 meetings were to identify the primary task roles of the various agencies who participated in the project, to plan and structure the summer workshop and determine responsibilities for the summer workshop and to plan evaluation strategies for various aspects of the project and its products. Preliminary decisions included:

- Orientation session for local superintendents and occupational education directors to take place before start of summer workshop.
- Summer workshop to be conducted at Cornell.
- Special sessions for curriculum coordinators to be held during the summer workshop.
- Two-day meeting of project participants to be scheduled for January.
- Commitments by the sites, participants, and coordinators to be written into the agreements with centers and sites.
- Principals from the State Education Department, Cornell Institute for Research and Development in Occupational Education, and Riverside Research Institute to meet with the three regional coordinators and teachers every four to six weeks during the year.

Orientation of Administrators

An orientation conference for Superintendents and Occupational Education Directors took place at Cornell University on July 1, 1975. The participants of that conference were the ISSOE project leaders from SED, CIOE, RRI, and Superintendents and Occupational Education Directors from the three designated regions who were to take part in the project.

The objectives of this conference were to orient the educational administrators toward the need for improvement of occupational education curriculum; the need for developing the Instructional Support System for Occupational Education in New York State; and the roles of the administrators in the ISSOE project.

July Leaders' Meeting

A meeting took place at Cornell at the end of the summer workshop; basic tasks accomplished at that meeting included:

- Flow chart of planned activities by Cornell (Diagram #1)
- Discussion of a "Model of a Process for the Development and Implementation of Modularized Programs in Occupational Education." This model (Diagram #2) was designed by Riverside Research Institute and later revised by Cornell Institute for Research and Development (Diagram #3) shifting emphasis from the development of topics to that of tasks and skills development.
- Reinforcement of task roles and strategies of action in the ISSOE project.

September Leaders' Meeting

Another organizational meeting of the leaders of the project was held at the Sheraton Inn, Ithaca, New York on September 5, 1975. The Sheraton meeting was designed to reinforce the pre-planned strategies of action for the ISSOE project by State, Cornell, and Riverside representatives.

State Education Department representatives redefined the roles of the various agencies involved and also repeated the commitments of the teachers and curriculum coordinators in the pilot phase. The teachers were charged with writing five additional modules for each region. They were committed to meet three hours per week for 20 weeks and complete the modularized curriculum package for Automotive Mechanics and Office Clerical.

The curriculum coordinators committed to nine hours per week for 20 weeks to facilitate the writing efforts of the local educational agents were critical agents in the project.

Riverside Research Institute representatives reviewed the Instructor's Reporting Package; the Riverside Research Institute representative planned to visit the local sites and explain the package in detail to the teachers. It was agreed that RRI representatives would assist in the interpretation of the computer printout. Their long term objective was to create a computer support system for two occupational areas and the package was to be transferred to the State regional computer system.

It was agreed by all participants that the modularized curriculum would be enhanced by developing learning activities; addressing cognitive styles in class; emphasizing learning resources; improving student evaluation procedures; and developing a system to support the teacher.

Diagram #1 Flow For ISSOE Work Plan

July 24, 1975

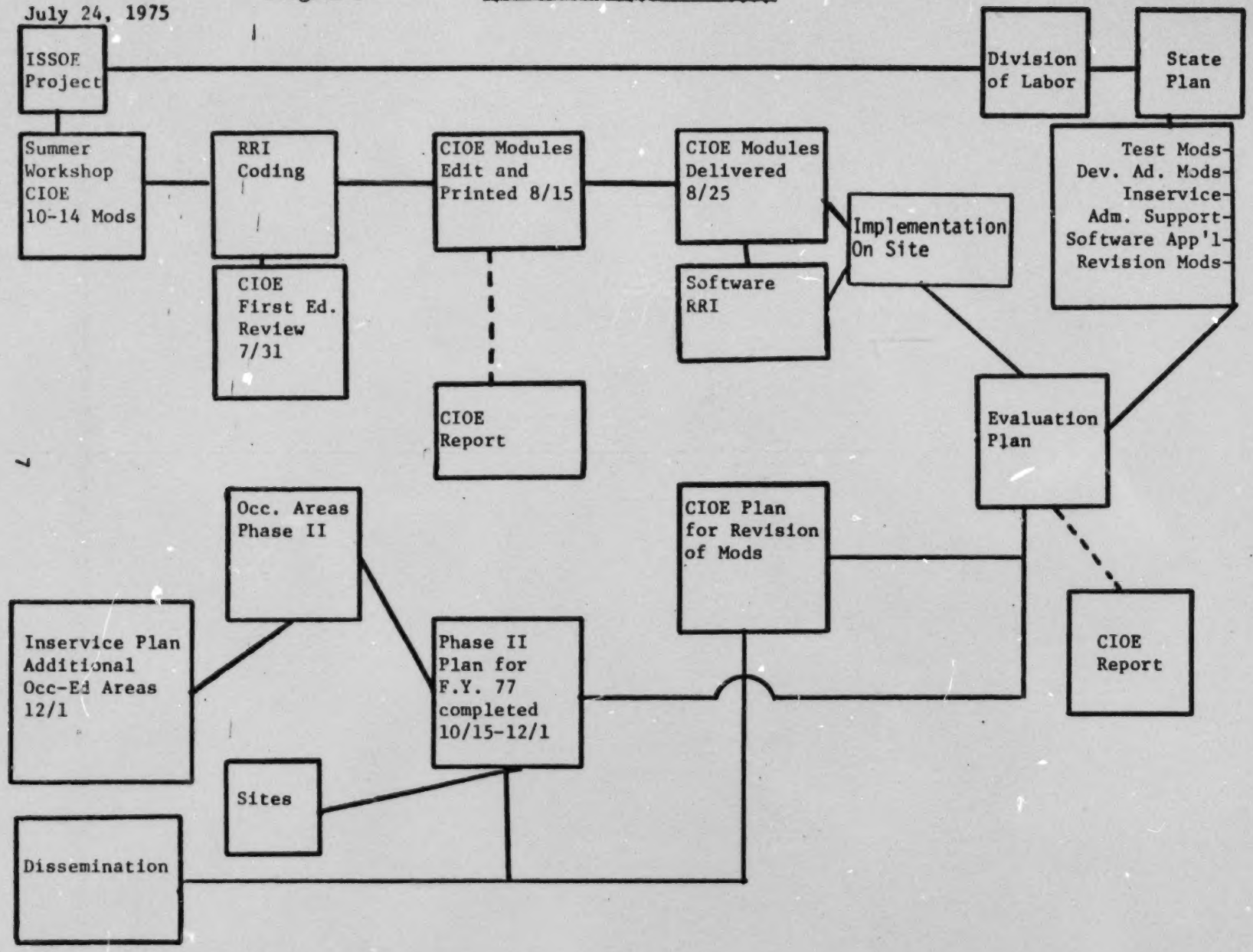
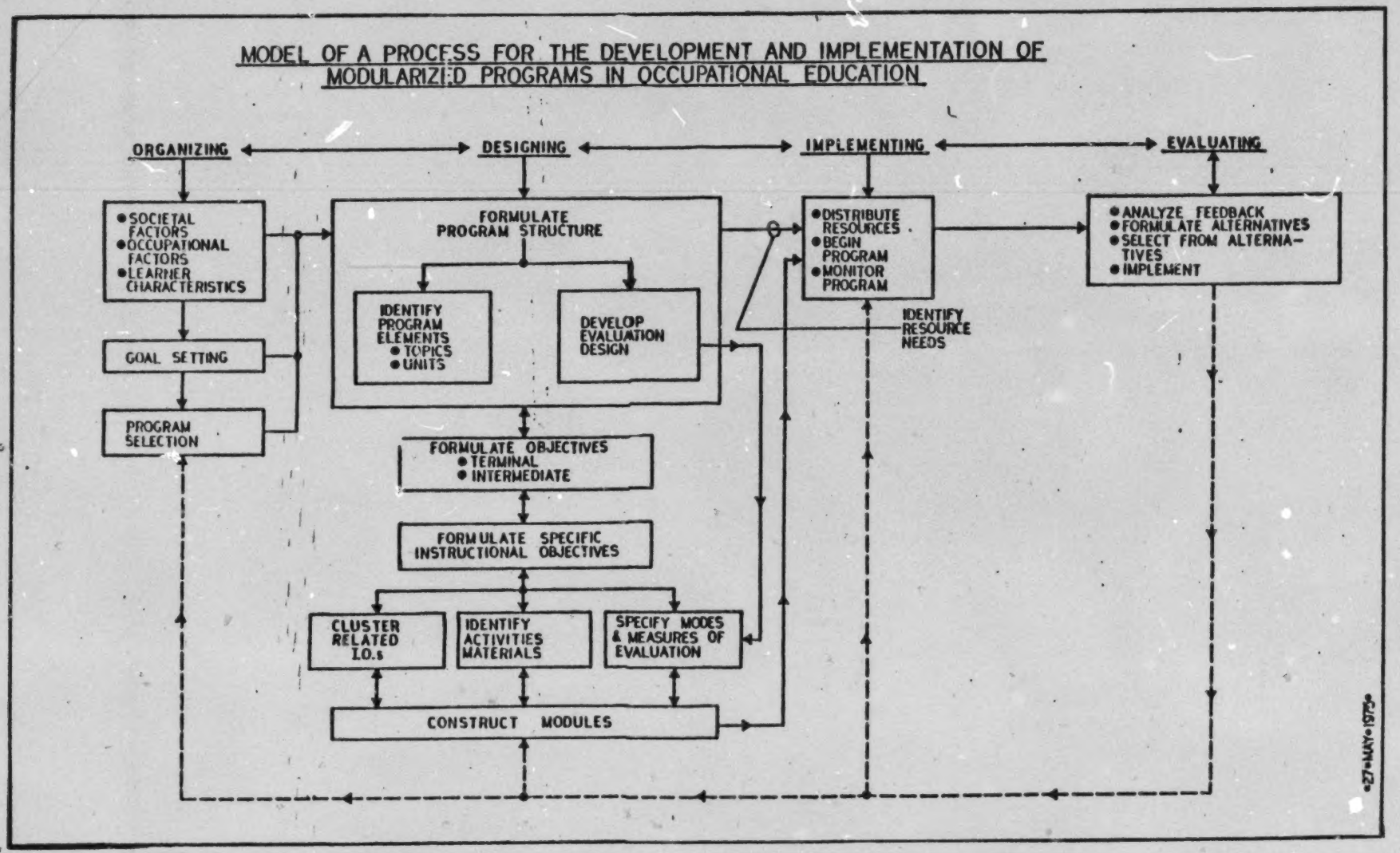


Diagram #2

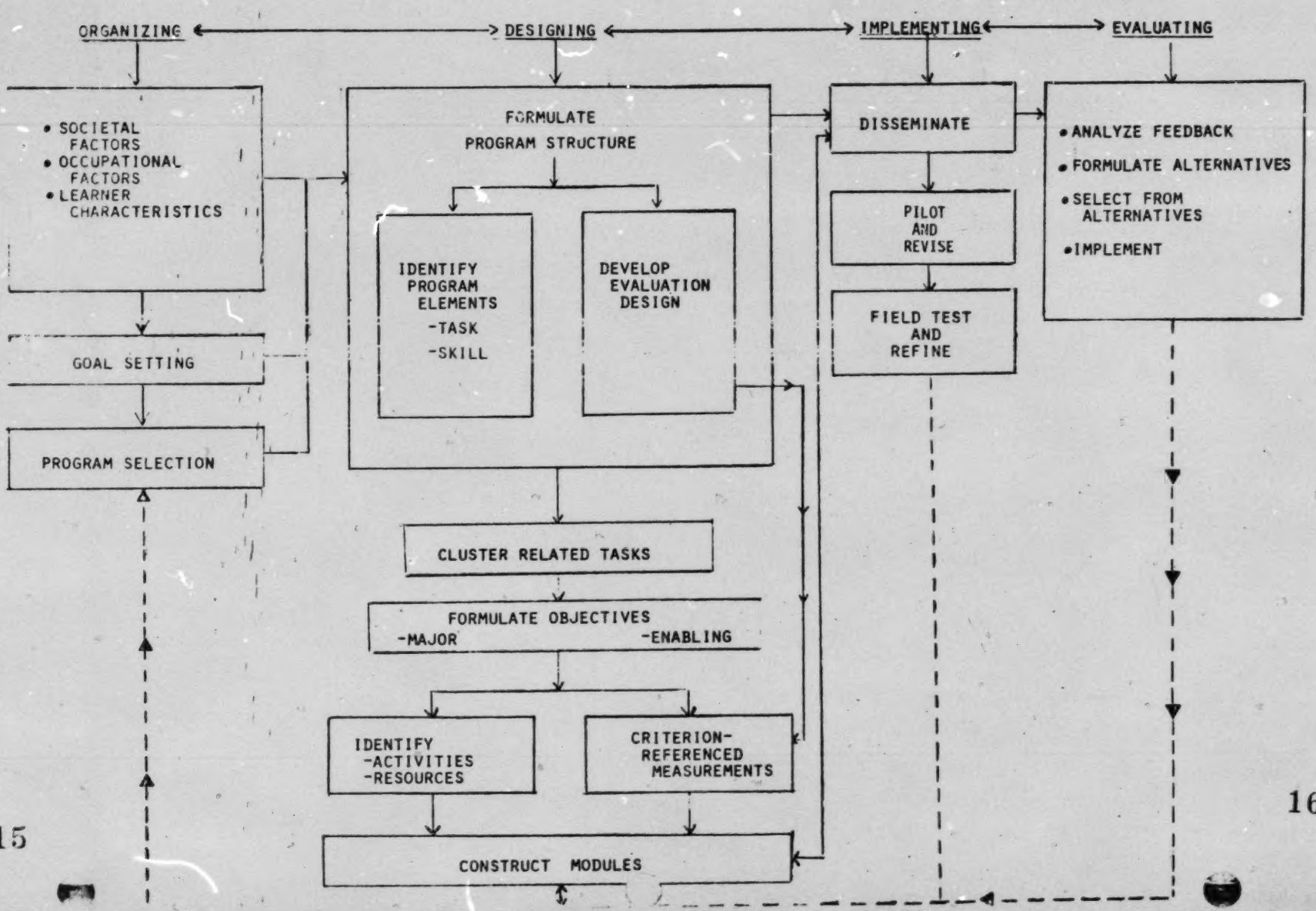


Riverside Research Institute

DIAGRAM #3

MODEL OF A PROCESS FOR THE DEVELOPMENT AND IMPLEMENTATION

MODULARIZED PROGRAMS IN OCCUPATIONAL EDUCATION



Weekend College Course

In order to prepare more people for the concept of modularized curriculum, it was decided to promote weekend college courses in various regions. Cornell University's Course 533 is a direct offshoot of the ISSOE approach in Statewide curriculum change. It was given as a college weekend extension from Cornell University and had as its objectives for students the following:

- Design strategies for developing instructional course content for occupational education courses and/or programs.
- Develop strategies for the utilization of a uniform format for curriculum development in occupational education.
- Construct curricular modules utilizing a uniform format following the performance objective mode.

Sixteen students participated in this course of which ten were sponsored by the New York State Education Department. During the four weekend meetings, each participant had completed one module in his/her vocational area. The modules were critiqued and have been implemented or tested in the various school sites.

Each one of the ten sponsored participants agreed to write an additional module. This was accomplished by the end of the academic school year. They met for thirty-six additional hours to develop and critique the new modules.

Regional Organizational Meetings

Meetings in each of the three regions took place as follows: Orange County BOCES, October 9, 1975 for Region II; Monroe County BOCES #1, October 11, 1975 for Region III; Nassau BOCES on September 17, 1975 for Region I. The participants were the teachers and curriculum coordinators from local school districts, State, Cornell, and Riverside representatives. Basically, all three meetings followed the same pattern: State Education Department representatives reminded the teachers and curriculum coordinators of their roles and their commitments during the duration of the project and the roles of the other agencies involved in the project. Teachers were reminded of their obligation to meet periodically locally or regionally to complete additional modules. They were also informed about a possible weekend college course and were advised by the State representatives of a two-day meeting of project participants to be scheduled in January of 1976 to exchange ideas, critique and discuss the implementation phase and the modular curriculum.

A representative of Cornell discussed their roles and duties in the project relative to the development of modularized curriculum and introduced the process evaluation.

A representative from Riverside Research Institute reviewed with the teachers and curriculum coordinators the Information Flow and Logistics System; explained how to complete the rosters for student evaluation data collection; and described the procedures of communication among the local sites and Riverside.

The teachers and curriculum coordinators raised questions relating to workload on the part of the teachers in regard to implementing the curriculum package in their classroom and writing additional modules; time spent during the meetings; and time spent on traveling from one center to another.

Specific problems of teachers were discussed. Some teachers indicated problems in implementing the plan as they were able to cover only a section of the package. This was due to the fact that some students rotate among teachers during the year and, in other cases, teachers are specialists in particular areas and, as such, do not teach a whole course.

Site Visitations

In addition to planning and implementing these major regional meetings, Cornell engaged in extensive visitations to project sites throughout New York State. The roster of visits has been filed with the Education Department and indicates that 77 days were spent in the course of 48 site visits. Visits were conducted for the purpose of continued training, observation of the curriculum-generation process, survey and evaluative activities, as well as coordinating visits with State Education Department representatives.

Curriculum Validation Meeting

The basic purpose of the meeting held on March 16, 1975 at the Sheraton in Ithaca was to determine if the ISSOE modularized curriculum development project encompassed the complete scope of the automotive service occupations.

The meeting afforded an opportunity to verify the completeness of the list of tasks stipulated for the automotive service trade. Since automotive teachers in secondary schools in New York State developed the modules for the automotive service occupations, it was important to validate these by comparing them with what the automotive mechanics actually do on the job.

This day-long critique session was attended by representatives of the New York State Education Department, selected teachers of Automotive Mechanics, Cornell Institute's training and administrative staff and two representatives from the Chrysler and Ford Corporations.

All modules were reviewed, discussed, and mutual agreements arrived at in relation to additional modules as well as revision of some modules. Assurance of curriculum relevancy as it relates to performance in the work world was a primary goal of this meeting.

Riverside Research Institute

Planning

In conjunction with the general role of providing technical support to the State Education Department in formulating methods and processes for development of ISSOE, Riverside Research Institute prepared the first model on which the process of modularized curriculum development and reporting was based. Roles and missions of participating agencies were developed by RRI and are delineated on a time-line basis as illustrated.

Technical Support

Riverside provided technical assistance to field-test centers to achieve iterative development of the information-handling component of the Instructional Support System. This component is often termed the Information Flow and Logistics Subsystem (IFLS) and appears as Appendix A of this Report. RRI produced this User's Guide to IFLS to serve as a handbook for teachers and coordinators in the fall field test. The guide reviews the highlights of ISSOE, presents samples of forms to be used, illustrates printouts and describes procedures to be followed in interfacing with the computer. Included in the guide is a description of the coding system developed by RRI for identifying elements of the ISS-based occupational curricula. RRI also developed abbreviated summary instructions for teachers. A Pupil File was constructed which associates students with their classrooms and teachers and appears as Appendix of this Report. Construction of a Computer Program File for data processing was established consisting of instructional unit code numbers and code numbers for objectives within each instructional unit. The file also contained a statement of each objective and information required to score situational tests.

Site Visits

Paramount among the efforts to provide support to the field participants was a series of visits made by Riverside to implementation sites. These visits afforded opportunities to gain insight into local operations, to discuss progress with participants and most importantly to distribute and explain, first-hand, the forms, processes and requirements contained in the Information Flow and Logistics Subsystem User's Guide.

Riverside was also represented at Cornell during the Summer Workshop and attended some of the Weekend College sessions in Rochester for the purpose of giving assistance in utilization of the computer retrieval system.

Reports

Reports were generated on request. Teachers who submitted evaluation record sheets received reports of mastery results for themselves and their students. Four reports of mastery were provided: a report by class of student mastery of objectives; a group response matrix; an individual response matrix; and an individual report for each student containing a statement of each objective and an indication of whether it was mastered by the student. Explanations and samples of these printouts appear in the IFLS Guide, Appendix A.

Diagram #4 - Roles and Missions of ISSOE Project Agents

RESPONSIBILITIES	April 1, 1975 – May – June	July	August	Sept.
OBJECTIVES/TASKS	Planning general specific for Curric. Workshop Selection of field sites and building of consensus among participants in ISS/OE and their administrators	Workshop in which participants in Project write a modularized partial curric. in 2 subject areas for use with ISS base in field test 9/75-2/76	Editing of Curric. I and distribution to participants Preparation of IFLS-I: Revision of software, preparation of forms, coding. Writing and distribution of Guide for Users of IFLS-I	Ⓐ Field testing of ISS/OE I Mod/units I. Objectives: • To begin the process of iterative revision. • To provide information useful for Ⓑ below. IFLS-I. Objectives: • To familiarize the experiment participants with the mechanics of IFLS and the functions of the computer. • To identify aspects of IFLS-I to be modified in Phase II and beyond. • To elicit ideas from users as to action-consequential information which IFLS might provide for a) teachers, b) counselors, c) administrators, and d) SED, leading to re-design of IFLS for Phase II and beyond. • To identify the most useful kind of information for facilitating curriculum revision. Ⓑ Creation of new mod/units (same subject areas as in I) for field-testing in Phase II. Ⓒ Creation of a specific design for ISS/OE-Phase II and a broad design ("blueprint") for future state-wide ISS/OE, perhaps capable of performing several related SED functions. Ⓓ Exploration of possible future regionalization of IFLS.
13	Select sites, negotiate contracts, achieve consensus of all parties to be involved	Participate in Workshop		Serve as overall manager and catalyst. Maintain close cooperative relationship with CIOE and RRI. Meet regularly with center groups (chaired by coordinators) to achieve Ⓐ and Ⓑ above. Serve as liason between SED and the field. Create mechanism for coordinating the work of field-testing groups on Ⓐ and Ⓑ. Prepare proposal for Phase II. Work closely with RRI in creating design concepts ("blueprint") for a future state-wide ISS/OE.
SED PROJECT				
Joint planning meetings	Plan summer Workshop	Conduct the Workshop	Edit, produce, and distribute Curric. I	Provide consulting leadership to centers in revising mod/units I and writing new ISS-based mod/units for Phase II. Attend relevant center meetings. Validate the ISS/OE curricula Maintain close cooperative relationships with SED and RRI. Evaluate Project
CIOE				
	Provide tech. assistance to SED and CIOE to insure that ISS requirements will be met in the development of the ISS/OE Curriculum I	Participate in Workshop	Generate coding system to identify curric. elements for use in IFLS. Revise software. Prepare forms. Write and distribute Users Guide for IFLS. Build program file.	Build pupil file. Provide technical assistance to field-test centers to achieve iterative development of IFLS-I and to write ISS-based new mod/units. Attend relevant center meetings. Provide technical assistance to SED in designing ISS/OE-II and in creating design concepts (a "blueprint") for a future state-wide ISS/OE which may encompass other related SED functions. Visit 3 BOCES computer centers to prepare recommendations to SED as to possible future regionalization of IFLS. Maintain close cooperative relationship with SED and CIOE.
RRI				

Local and Regional Educational Agencies

In accord with project objectives, curriculum coordinating agents were appointed in each participating locale. Project applications were filed, submitted and funded for a twelve month period. Teachers attended the Summer Workshop at Cornell University and additional teachers of Business Education participated in a Weekend College Course given by Cornell University at the Board of Cooperative Educational Services in Monroe, a suburb Rochester, New York.

Two curriculum packages were constructed as planned in the first year of the project and plans made for refinement of the products to be accomplished in the summer of 1976. Modules were tested by teachers, exchanged, critiqued, and sent on to final printing at the close of the project period, June 30, 1976.

Local and regional administrators assisted teachers and coordinators in the execution of the project.

Districts were requested to submit data to the Support System; however, teachers proved reluctant to comply with this facet of the project. Pupil profiles were constructed and some evaluations entered and several reports called for by a small number of participating teachers.

III. RESULTS OF AGENTS' ACTIVITIES

Cornell Institute for Research and Development

As indicated in the Agency Activities Section of this Report, the Cornell Institute for Research and Development conducted a variety of training and curriculum development procedures. Process evaluation was carried on throughout the year and a summative report filed with the New York State Education Department. Results of the surveys in relation to activities conducted by Cornell are presented here (See Appendix D).

Summer Workshop Evaluation

A questionnaire designed to answer specific areas of concern was administered to teachers at the conclusion of the Workshop. Major observations include the following:

Question:
Did the teachers understand the workshop objectives; were the objectives met; and did the teachers understand their roles in the workshop?

Response:
Less than 52% of the participants understood the workshop objectives before they came to Cornell. At the end of the workshop over 90% felt that the objectives were met and that the workshop was a major force in developing this teacher-generated modular curriculum.

Question:
Was the workshop effective in developing a modularized curriculum?

Response:
90% of the teachers had agreed such a workshop may be "the way to go" to produce modularized curriculum for other occupational areas using a similar cross section of teachers.

Question:
Was the workshop a group effort and was there consensus?

Response:
89% of the teachers felt that they had adequate opportunity to express their ideas and that their colleagues were willing to discuss those ideas. 89% had a sense of accomplishment.

Question:
Was the organization and physical setting of the summer workshop conducive to productivity?

Response:
About 61% of the participants had accepted the physical setting. Some had added recommendations for improvement such as air conditioned rooms, larger rooms, better accommodations in dorms and eating facilities. 72% felt that the duration of the workshop was adequate to achieve the objective. 80% found organization and leadership in the workshop to be positive.

Question:
Comments, likes and dislikes, and future participation by teachers.

Response:
96% of the teachers would participate again in such a workshop if the opportunity were available and they recommended that other teachers attend a similar workshop.

Weekend College Workshop Evaluation

Upon completion of the Weekend Workshop, held in the fall of 1975 adjacent to Rochester, participants responded to queries as follows:

Question:
Were the course objectives understood?

Response:
At the beginning only 41% understood the objectives; this increased to 100% by the conclusion of the course. Initially 51% understood their role in the course and by completion, 64% reached such understanding.

Question:
Is a unform format a positive approach for curriculum?

Response:
Understanding of uniform format increased from 62% to 91% by the end of the sessions. However, when teachers were asked about their ability to utilize such format for their curriculum, responses indicated a 20% reduction in utilization over the pre-test response. Apparently, further training is indicated as teachers appear skeptical about use of similar format in all curriculum areas as evidenced by only 64% claiming that they can indeed utilize the format.

Question:
Was the workshop group effort and was there consensus?

Response:
Group exchange of ideas and mutual critique appealed to most participants; 95% indicated that individuals had become an integral part of the group process while developing curriculum. All teachers had the opportunity to express professional expertise in the process.

Question:
Would you recommend Education Course 533 as a tool of curriculum change to other teachers?

Response:
50% at the beginning of the course considered Education 533 a vehicle for inservice training in curriculum development; 50% were not sure. By course end, 82% believed that the course is a definite approach for inservice training. Another 9% did not consider the course as inservice training and 9% were not sure Education 533 is the right approach. When asked if they would attend again, 64% responded positively and 36% were not sure. In regard to recommendation of the course for other teachers, 82% did recommend a similar activity while 18% were not sure. The latter were not sure that the course satisfied their needs.

Question:
Have you a sense of accomplishment?

Response:
When asked what they expected to gain from the course, 89% indicated professional improvement, improved teaching skill, and a better understanding of curriculum. At course end, 90% of the teachers indicated a sense of accomplishment in regard to writing modules; 10% felt skeptical or thought they had not written a finished product. In regard to whether they gained what they expected from Education 533, 55% did achieve their objectives; 27% did not gain at all; and 18% were not sure.

Question:
What is your assessment of organization, leadership, physical setting?

Response:
64% of the teachers felt that the course was well organized; 36% felt the opposite. 82% felt that good leadership was displayed whereas 9% felt negatively about leadership and 9% were not sure how they felt. General recommendations for changes or modifications regarding organization were made by 64% of the group. In regard to physical setting, 91% felt positively about the place where meetings were held. Preference was stated for four weekend sessions including Friday evening and an all day Saturday session.

School Year Evaluation of Teachers and Curriculum Coordinators

In conjunction with conducting an on-going evaluation of both the delivery system and the curriculum materials utilized, Cornell Institute for Research and Development surveyed teachers and curriculum coordinators during January and February of 1976.

Data was gathered from 22 teachers, 15 Automotive Mechanics and 7 Office Clerical teachers, and five curriculum coordinators involved in the ISSOE project from the following school systems: Dutchess County BOCES, Monroe County BOCES #1, Nassau County BOCES, Orange County BOCES, Putnam-Westchester BOCES, and the Rochester City School District.

Information gathered by interview was categorized into the following topics: 1) Teachers' Management Tool/Curriculum Coordinators' Management Tool, 2) Curriculum, 3) Management of the ISSOE project, and 4) Statewide Expansion.

Teachers and curriculum coordinators made similar responses to many questions proposed. Curriculum coordinators and teachers feel that the ISSOE approach can improve classroom and shop management efforts. Both groups recognize the need for improvement and refinement.

In regard to the curriculum package, both groups are satisfied with the majority of modules and will be utilizing the modules in the future; some improvements were recommended. There is a positive consensus regarding adaptability of modules to individual instruction. The effect of the curriculum appears positive and competitive with previous curricula.

Teachers and curriculum coordinators approved management of the ISSOE project; they see the agencies involved effective in their respective roles. However, an improvement was suggested in the exchange of new modules. Hereafter, new modules will be reviewed and edited by CIOE staff before they are sent to other regions to be critiqued. In addition, teachers and curriculum coordinators requested an improvement in student reporting procedures.

A statewide application of this approach is seen as desirable and the following recommendations offered in this regard:

- Statewide exchange of complete modules for critique from various sites.
- Workshop activities and follow-up activities of Universities and the State Education Department occurring on a statewide basis.
- Veteran project teachers and curriculum coordinators of the ISSOE project acting as lead persons to assist other school systems in the transition to the ISSOE curriculum approach.
- Validation and updating of modules occurring on a statewide exchange and critique basis.
- State Education Department and regional Universities promoting statewide curriculum change.
- Teachers and curriculum coordinators receiving support in implementation of the curriculum transition.

Reactions of Occupational Education Directors

One of the major purposes of interviewing Occupational Education Directors during March of 1976 was to identify their observations, reactions, and opinions concerning the ISSOE approach. Interviews were conducted yielding the following information from six Directors at project sites:

Question:
What factors are to be considered in the Occupational Education Director's decision-making process for implementing any vocational program and the adequacy of the information gathered?

Response:
For the purpose of decision-making, the ISSOE approach has great potential in providing information for administrative personnel. This seems to be especially true with regard to the status of students' progress, cost analysis, need of special orientation for teachers and staff development related to the program.

Question:
What information were Occupational Education Directors able to collect up to the present stages of the ISSOE project?

Response:
The majority of the occupational education directors were able to collect limited information regarding the need for staff development and special orientation for teachers and status of student progress.

Question:
Does the information gathered enable Occupational Education Directors to make program decisions regarding specific items?

Response:
In general, there was a consensus among the Occupational Education Directors that the ISSOE modular approach could assist them in making program decisions.

Question:
By which communication channels were the Occupational Education Directors informed and how adequately?

Response:
The majority of the Occupational Education Directors felt that the communication channels for information were adequate and the most informative communication channel seemed to be the teachers involved in the project.

Question:
By which mode will the Occupational Education Director be able to continue the ISSOE approach in his locale in the future?

Response:
In general, the Occupational Education Directors would continue the project in their own locale, using a mode similar to the ISSOE approach.

Curriculum Validation Meeting Results

Automotive company representatives suggested that five modules would complete the parameters of the automotive service occupations; these include: 1) Wheel Bearing Service; 2) Starting Systems; 3) Standard Transmissions; 4) Energy Absorbing Bumpers; and 5) Rear Defogger and Defroster. As recommended, these modules have been included under appropriate units.

The representatives complimented teachers on the completeness with which they examined the automotive service program. This validation effort provides increased confidence that an adequate basis for continued development exists in the Automotive Mechanics modules cluster.

Additional helpful comments provided by representatives at this meeting included the following:

- Students should be knowledgeable about job interviews; a neat, clean student who have a complete tool kit will make a better impression on an employer.
- The need in industry is mostly dependability of auto mechanics.
- A student usually starts with a dealer in new car preparation or used car reconditioning.

- Some "tasks" performed in Auto Mechanics courses should be performed by other vocational areas: i.e., core boring.
- Some problems in the service area in industry are emission control, carburetor, and fuel injection systems.
- Quality of work is preferred over flat rate time by service employer. Flat rate is not a qualification for employment; a reasonable length of time is acceptable.

As a result of this meeting the list of Units and Modules was completed in the first phase of modularized curriculum development in the Automotive Mechanics course. Diagram #5, which follows, represents the list agreed upon at this validation meeting.

Utilization of Modules

Status Reports issued by Cornell Institute for Research and Development include information regarding usage of modules by participating teachers. Table #1, which follows, indicates the number of modules which were tested during the period from September 1975 to January 1976. Dissimilar scheduling, a variety of teaching formats, and individualization of instruction in some places account for the diverse usage pattern. Some teachers are responsible for only a certain portion of the curriculum package. At the conclusion of a twelve-week period in some instances, pupils move on to another teacher who may not have been trained in the ISSOE approach.

Table #2 indicates the prognosis for future usage of modules. Of the teachers who utilized initial modules, the majority indicated that they would continue to use all of the modules again.

Regarding degree of satisfaction with individual modules, Table #3 illustrates that most modules produced proved satisfactory with a number of minor adjustments and a few major changes requested. Changes recommended through this survey were addressed during the 1976 Summer Workshop at Cornell.

Format Resulting from Consensus

A major objective of the ISSOE project was to produce a uniform format for modularization through the consensus process. Teacher opinion and input into format design were critical since only an acceptable format would insure usage of the packages produced. Format was intended to be applicable to diverse areas of occupational education; for this reason, the dissociated clusters of Automotive Mechanics and Office Clerical were tested in the pilot effort. It was assumed that if a process and common format could be used for these diverse curriculum areas, the model would exist for all other curriculum clusters as well.

Diagram #5

I S S - O E

MODULAR CURRICULUM DEVELOPMENT FOR OCCUPATIONAL EDUCATION

AUTOMOTIVE SERVICE OCCUPATION

AUTOMOTIVE MECHANICS COURSE

UNIT: INTRODUCTION TO AUTO MECHANICS

MODULE:

1. Shop Procedures
2. Personal Safety
3. Job Requirements
4. Job Market Trends
5. Hand Tools
6. Power Equipment
7. Lubrication Service
8. Wheel Bearing Service
9. Tire Service

UNIT: CHASSIS AND FRAME

MODULE:

1. Drum Brakes
2. Disc Brakes
3. Hydraulics
4. Front Suspension
5. Rear Suspension
*6. N.Y.S. Inspection
7. Alignment
8. Steering

UNIT: POWER PLANT

MODULE:

1. Liquid Cooling
2. Carburetor
3. Storage & Delivery
4. Fuel Injection
5. Primary Circuit
6. Secondary Circuit
7. Tune-up & Diagnosis
8. Electronic Ignition
9. Exhaust System
10. Emission Control
11. Short Block
12. Valve Systems

UNIT: ELECTRICAL

MODULE:

1. Lights
2. Storage Batteries
3. Charging System
4. Starting System
5. Instruments
6. Power Accessories

UNIT: DRIVE LINE

MODULE:

1. Drive Shaft
2. Rear Assembly
3. Clutch Assembly
*4. Manual Transmission
5. Automatic Transmission

UNIT: BODY MECHANICAL

MODULE:

1. Body Adjustments
2. Glass Adjustments
*3. Energy Absorbing Bumper
4. Interior Appearance
5. Exterior Appearance

UNIT: ACCESSORIES

MODULE:

1. Heater
*2. Air Conditioner
3. Speed Control Devices
*4. Rear Defogger/Defroster

*Not completed

Table #1

STATUS REPORT

A summary of the modules that were taught and tested

from

September 1975 - January 23, 1976

NUMBER AND MODULE	# OF TEACHERS WHO TAUGHT A COMPLETE MODULE TO ALL STUDENTS (A) GROUP INSTRUCTION	# OF TEACHERS WHO TAUGHT A COMPLETE MODULE TO SOME STUDENTS (S) INDIVIDUAL INSTRUCTION	# OF TEACHERS WHO TAUGHT PART OF A MODULE TO ALL STUDENTS (A) GROUP INSTRUCTION	# OF TEACHERS WHO TAUGHT PART OF A MODULE TO SOME STUDENTS (S) INDIVIDUAL INSTRUCTION
AUTO MECHANICS (a)				
1 General Safety	12	0	2	0
2. Job Opportunities & Requirements	5	2	3	1
3 Tools & Equipment	6	3	3	0
4. General Auto Service	3	6	0	2
5 Brake System	2	2	1	5
6 Suspension System	1	2	3	4
7 Cooling System	2	3	3	4
8 Fuel System	0	2	5	4
9 Ignition	1	2	6	3
10 Exhaust System	4	4	1	2
11 Lighting Systems	2	1	3	2
12 Charging & Starting Systems	2	1	6	2
OFFICE TRAINING (b)				
1 Adding Machines	3	0	1	0
2 Filing	0	0	3	1
3. Office Forms	1	0	1	0
Payroll Procedures	1	0	0	0

(a) 15 Auto Mechanic Teachers
(b) 5 Office Training Teachers

Table #2

Number of teachers who indicated that they will continue to use the modules

No. & Module	Yes All of the module	Yes Part of the module	No	Do not teach* this module	Total No. of teachers
AUTO MECHANICS					
1. General Safety	13	1	1	-	15
2. Job Opportunities & Requirements	10	1	2	2	15
3. Tools	11	2	2	-	15
4. General Auto Service	9	3	1	2	15
5. Brake System	8	1	1	5	15
6. Suspension System	6	3	1	5	15
7. Cooling System	9	1	1	4	15
8. Fuel System	9	1	1	4	15
9. Ignition System	7	3	1	4	15
10. Exhaust System	9	1	1	4	15
11. Lighting Systems	9	-	1	5	15
12. Charging and Starting Systems	7	3	1	4	15
OFFICE TRAINING					
1. Adding Machines	5	2	-	-	7
2. Filing	4	1	1	1	7
3. Office Forms	4	-	2	1	7
4. Payroll Procedures	2	-	2	3	7

*1. Several auto mechanic teachers are restricted to teaching certain modules only, i.e. a certain teacher will teach suspension system only, while his students rotate to other teachers.

2. Several office training teachers had not yet covered the total curriculum package for office training.

Table #3

Teacher satisfaction with the individual modules in the curriculum package: Auto Mechanics & Office Training

No. & Module	No. of teachers who indicated:			No. of teachers who did not teach this module
		IMPROVEMENT		
	O.K.	MAJOR	MINOR	
AUTO MECHANICS				
1. General Safety	5	3	7	
2. Job Opportunities & Requirements	5	2	7	1
3. Tools	5	1	9	
4. General Auto Service	6	2	6	1
5. Brake System	8	-	4	3
6. Suspension System	8	-	4	3
7. Cooling System	8	-	3	4
8. Fuel System	6	-	3	6
9. Ignition System	6	1	2	6
10. Exhaust System	9	-	4	2
11. Lighting Systems	6	1	3	5
12. Charging & Starting Systems	6	-	4	5
OFFICE TRAINING				
1. Adding Machines	2	1	1	2
2. Filing	1	1	2	2
3. Office Forms	2	1	-	3
4. Payroll Procedures	3	1	-	2

Arriving at consensus in this regard constituted one of the most complex problems in project development. This was due to both a variety of philosophical approaches to the task as well as to the problem of establishing a common nomenclature. The definition of a module continues under discussion; however, for practical purposes, a format with glossary has generally been agreed upon and appears as Diagram #6, which follows. Samples of how this format was applied to Automotive Mechanics and Office Clerical appear as Appendix B of this Report.

During the summer of 1976, the format was utilized by teachers of Building Industries Trades and Food Trades and proved readily adaptable to new curriculum cluster areas as well.

Riverside Research Institute

In accord with its principal objective of providing technical support for modularized curriculum development in this project, Riverside established the data base and retrieval system. Procedures, manuals, and personal directions were given to participating teachers; however, usage of the system was minimal. Few mastery sheets (i.e., evaluation records) were submitted by teachers for processing and evidenced by the utilization figures shown on Table #4. Sites not included in the table did not use the data-handling component at all, beyond providing the student rosters necessary for the establishment of a student file. Those areas which did use IFLS used it to a limited extent as shown by the minimal computer processing requested.

Teachers taught more units of instruction than would be suggested by the quantity of mastery test results submitted for processing to RRI; some sites did not submit any mastery test results.

Some parts of what IFLS was supposed to accomplish were sometimes carried out in other ways. For example, in Auto Mechanics classrooms at one site, RRI noted that teachers were maintaining large wall charts which contained a two-dimensional grid. Student names were the rows and curricular objectives were the columns. Presumably, when a student mastered an objective, or completed a module, the teacher blackened the appropriate square in the matrix. The chart was always on the wall available for inspection by teachers or students. To our knowledge, the wall chart procedure and IFLS were not joined. Teachers were expected to carry out both activities. To the extent that this and similar redundancies were perceived, teachers may have resisted utilizing IFLS.

Diagram #6 ISSOE Module Format

COURSE: State-approved course of study; the course consists of those modules of instruction essential to the acquisition of competencies expected by the world of work.

UNIT: A logical clustering of related modules of instruction.

CODE:

Digits 1 and 2 -	Subject Area
Digits 3 and 4 -	Program
Digits 5 and 6 -	Course
Digits 7 and 8 -	Unit
Digits 9 and 10 -	Module
Digits 11 and 12 -	Performance Objectives

MODULE: A portion of the total curriculum which addresses related tasks drawn from occupational analysis expressed in performance terms as objectives. Each module contains learning activities and criterion-referenced measurement procedures.

TASK: A work activity performed by an individual which has a definite beginning and ending, and is performed within a limited period of time. A task statement usually consists of an action verb and an identification of what is acted upon. A module may include one or several related tasks.

MAJOR AND ENABLING OBJECTIVES

MAJOR OBJECTIVE

A task-oriented statement of what the student should be able to do, the conditions under which the task will be performed, and the standards for evaluating the performance.

ENABLING OBJECTIVE

A subordinate objective which describes in performance terms a cognitive, affective, and/or psychomotor skill which the student will need to acquire in order to accomplish the major objective.

LEARNING EXPERIENCES AND RESOURCES

Activities designed to enable students with different learning styles and needs to achieve the performance objectives. Learning experiences should be varied and specify the instructional technique and the resources by titles. Special emphasis should be given those materials which have been exposed to formal teacher or learner verification. The development of learning experiences is the basic responsibility of the teacher; activities listed in the module are NOT prescribed, but intended as an aid to the teacher in planning instruction.

CRITERION - REFERENCED MEASUREMENT

Criterion-referenced test item(s) are derived from the performance objectives and directly measure the individual student's ability to successfully complete the tasks identified in the module. In general, the test items should be performanced-based and replicate the tasks as they would be evaluated in the world of work.

Some teachers and coordinators complained about the amount of paperwork, and stated that they had been withholding submission of mastery results simply because they had not found time to complete the forms and send them to their respective coordinators. The amount of paperwork that teachers are willing to execute is related to the probable benefits to them, e.g., rendering them more effective, more efficient, or the recipient of some other benefit. The paperwork may have seemed to be too heavy because the returns for executing it were not evident to the teachers who were asked to do the work.

In terms of ISSOE planning, an IFLS that was designed specifically for occupational education might have substantially less paperwork. In the field test, the constraints of time and money made it necessary to use for occupational education an IFLS which was developed for general education, where paper-pencil tests prevail and each student has his own test answer sheet. When this system was used in occupational education, a skills checklist had to be generated for each student. If a teacher wished to submit mastery results for 30 students, he had to enter these results on 30 pieces of paper. However, in an IFLS which took account of the fact that mastery data would be recorded by teachers, it would be possible for the teacher to indicate mastery results for all the students completing a unit on a single piece of paper, thereby reducing the effort required for the recording task.

Some teachers may have held back mastery results for an appreciable amount of time because they had not completed teaching all of the objectives in a particular unit. This action was consistent with the original instructions provided in their IFLS guides. However, even when a software modification made this instruction no longer necessary, and a revision of the relevant instructions in the teachers' IFLS guide was distributed, the number of mastery reports from teachers did not increase appreciably.

Perhaps the most important factor in causing the under-utilization of IFLS was one that might have been foreseen from ISS experience in general education. Teachers, even if they wish to make an ISS-based curriculum work successfully, need a good deal of assistance during the first months of the program. The mechanics of IFLS, which later seem simple, at first seem enormously complicated. In the design of the pilot project, support for the participating teachers was supposed to be provided through frequent site and regional group meetings and the efforts of the coordinator for each region. RRI found much evidence early in the fall that the necessary support for teachers was not being provided.

Table #4

IFLS FIELD TEST UTILIZATION STATISTICS

Center I.D. School Code - Area Center	Number of Tests Processed	Units Taught and Evaluated by Teachers
411 - Orange BOCES	340	Office Practice: 143301, 143303 Auto Mechanics: 173203, 173204, 173209, 173211, 173214, 173215, 173216
311 - Dutchess BOCES	275	Auto Mechanics: 173201, 173202, 173203, 173204, 173205, 173206, 173207, 173208, 173214, 173215, 173216
813 - N.E. Center Nassau BOCES	166	Auto Mechanics 173201, 173202, 173203, 173204, 173205, 173208, 173209
Total -	781	

Alternate Computer Test

In January of 1976, the Riverside Research Institute completed its obligations to the ISSOE project. The following six months were utilized to test a different mode of data processing; namely, the cathode ray tube (CRT) terminal. A computer specialist was engaged to transfer the forms developed by Riverside to an electronic system. Terminals were installed at six project sites and information sent to Comnet in Washington, D.C. A new manual, The ISSOE Terminal Manual, was developed and introduced to teachers and coordinators in the field (See Appendix C).

Although electronic input of data reduced paperwork and mailing problems encountered through the Riverside system utilization of a new system proved psychologically overpowering for participants and resulted in minimal usage. Only one district utilized the system fully in the short time it was available. All others refrained from usage other than input of student data file information.

Current and future efforts in re-establishing this problematic component of the project will be directed toward putting ISSOE data on regional computers throughout the State of New York.

Local Educational Agencies

As a result of this project, six districts throughout New York State have had thirty-five teachers and curriculum coordinators participate in the modularized, performance-based curriculum generation process.

Teachers were formally trained through the Summer Workshop at Cornell University or through the Weekend College Course held in the Rochester Region during fall of 1976.

All modules produced during the summer and regular school year were exchanged among teachers throughout the State, critiqued, and revised prior to final printing. Thus, two curriculum packages have been developed in Automotive Mechanics and Office Clerical through the efforts of administrators, curriculum coordinators, and teachers in local educational agencies.

The ISSOE Milestones Table #5, which follows, summarizes both the major events of Cycle I of the project together with events which have occurred in the second stage of development.

Transport of Automotive and Office packages has begun and during the 1976-77 school year teachers new to the modularized system will be testing and further refining these first two modularized packages generated by the first six districts.

In addition, new local educational agencies and a second training center have been brought into the curriculum development process as a result of this first attempt at building an Instructional Support System for Occupational Education.

State Education Department

All activities described in this Final Report are a reflection of general management by the New York State Education Department. The Milestones Table below summarized the major events planned jointly by project agents under the direction of State coordinating staff.

Activities as described in Table #5 represent the current status of the Instructional Support System which is undergoing expansion. The long-range plan of statewide saturation of training in and implementation of modularized curriculum in occupational education is well underway. According to plan, Automotive and Office packages are being distributed for use by other teachers through the feeder sites established through this original project. A new VEA Part C proposal has been submitted and approved providing for this expansion as well as development of modularized packages in new curricular areas.

Major revision of the computer retrieval system is under study and plans being made to transfer the Support System to regional computer centers throughout the State.

Table #5

ISSOE MILESTONES

CYCLE I - FY1974 Proposal Activities

- Curriculum Selection
  March-April 1975
- Site Selection and Project Personnel
  March-April 1975
- Administrative Orientation
  July 1975
- Curriculum Workshop
  Cornell, July 1975
- Weekend Workshop
  Rochester, November 1975
- Inter and Intradistrict
  Critique Process, March 1976
- Final Edit of Products
  April 1976
- Distribution of Curriculum Products
  May 1976
- Curriculum Transport and Trial
  September 1976

CYCLE II - FY1976 Proposal Activities

- Curriculum Selection - New Areas
  February 1976
- Curriculum Refinement and Transport
  Plans - February 1976
- Site Selection and Sub-contracts
  March 1976
- Administrative Orientation
  July 1976
- Curriculum Workshop
  July 1976
- Inter and Intradistrict Critique
  Process - Fall-Winter 1976-77
- Final Edit of Products
  April 1977
- Completed Curriculum Products
  May 1977
- Curriculum Transport and Trial
  September 1977

IV. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Process Evaluation Charts I and II constructed by Cornell Institute for Research and Development reflect major conclusions. Agents executed their principal responsibilities as originally planned in regard to the Instructional Support System for Occupational Education.

The model for teacher-generated, modularized curriculum in occupational education is a workable one requiring some modifications. Training of teachers and production of curriculum packages took place as planned and a statewide network of module exchange and critique tested.

The project was highly successful in generating teacher interest in and serious work at organization of curriculum and classroom management. Strong teacher enthusiasm reported in the Interim Report on the project was maintained throughout the life of the project. Neighboring districts have sought entrance into the system and a substantially larger number of teachers are participating in both use of tools developed and production of additional packages in new curriculum areas.

Any statewide endeavor of this magnitude creates predictable problems. A philosophy has to be communicated to all participants and agencies; agreements have to be achieved regarding concepts, terminology and common format; the psychological support of administrative, training, and coordinating agents given to teachers must be maintained at a high level; and day-to-day problems resolved as quickly as possible.

The most problematic area of development has been installation and utilization of the computer retrieval systems tested. This is due to the fact that it has proved unsatisfactory to begin measurement on the basis of developing, changing curriculum modules. A technical support system should follow-up rather than parallel curriculum development. Teachers need longer periods of orientation to, and training in, the use and appreciation of data base operations. Trying to establish this base in the first year of the project created problems which will be even more difficult to resolve now that two systems have been tried prematurely. However, transition to regional State computers as now anticipated may help ease the problem. It appears that the complexity of the reporting system may also need simplification in order to make it viable and usable. The four report forms developed for the project may be too complex and repetitive to be of immediate use to the teachers.

Chart I

I S S - O E PROCESS EVALUATION

DEVELOPMENTAL PHASE

AGENCY	OBJECTIVES	ACTIVITIES	CRITERION QUESTIONS	CONCLUSIONS
SED	1. To provide overall management for the ISS-OE project--assist, direct, support.	1. Contract with other agencies. Establish primary roles for each. 2. Establish strategies for operation. 3. Initiate, plan and prepare for summer workshop.	1. What was done by SED? a) Were contracts arranged? b) Were roles established accurately? c) Was workshop planned?	SED was a major supportive force and provided overall management of this phase of the project. Contracts were arranged. Roles were accurately established. The workshop was planned.(5/29/75)
CIOE	1. To develop and test a system for curriculum change. 2. To develop a modularized, performance-based curriculum on a state-wide basis using a uniform format.	1. Conduct Leaders' Meeting, Ithaca N.Y., 5/29/75. 2. Conduct Summer Workshop, Cornell University, 7/7/75 - 7/24/75. 3. Administer questionnaires to workshop participants. 4. Conduct Leaders' Meeting, Ithaca N.Y., 7/24/75 & 9/5/75. 5. Edit curriculum package. 6. Verify curriculum package. 7. Refine and re-establish strategies, operations and roles.	1. Was a system for change developed and tested? 2. Was a modularized, performance-based curriculum developed? 3. Were questionnaires administered and analyzed? 4. Were meetings held? 5. Was curriculum package edited and verified? 6. Were strategies, operations and roles refined?	CIOE achieved its objectives. The system was developed and tested; the curriculum was developed, edited and verified. The Leaders' Meetings were held on Aug. 24, and Sept. 5 to refine strategies, operations and roles.
RRI	1. To provide support in developing modularized, performance-based curriculum on a state-wide basis. 2. To provide systems-analysis support.	1. Plan and prepare for summer workshops. 2. Participate in summer workshop. 3. Attend Leaders' Meeting, Ithaca, N.Y., 7/24/75. 4. Develop student reporting system.	1. What did RRI do? a) Was RRI an active force? b) Did RRI plan and prepare for summer workshop? c) Did RRI staff participate in the summer workshop? d) Did they attend the Leaders' meeting? 2. Was the student reporting system developed?	RRI achieved their objectives. They prepared for and participated in the summer workshop. RRI staff participated in the Leaders' Meeting. A student reporting system was developed.

TEACHERS IN LOCAL SCHOOL SETTINGS	1. To develop modularized curriculum package for auto mechanics & office training on a uniform format.	1. Generate performance-based curriculum package.	1. Was curriculum package produced? How complete is it?	The objective was achieved - a tentative curriculum package was produced. However, it is not complete. It need completion, revision, editing and validation. The summer workshop was effective in producing curriculum change.
	2. To determine the effectiveness of a summer workshop.	2. Participate in summer workshop at Cornell.	2. Is a summer workshop an instrumental tool in curriculum change?	
REGIONAL CURRICULUM COORDINATORS	1. To assist teachers in production of the curriculum package in the summer workshop.	1. Support and assist teachers in the summer workshop.	1. Did curriculum coordinators assist teachers in the summer workshop?	The objective was achieved. Curriculum coordinators did assist in the summer workshop.

Chart II

I S S - O E PROCESS EVALUATION

PILOT TESTING PHASE

AGENCY	OBJECTIVES	ACTIVITIES	CRITERION-QUESTIONS	CONCLUSIONS
SED	1. To provide overall management of the ISS-OE effort.	1. Coordinate efforts of all agencies.	1. Did SED coordinate efforts of agencies involved?	SED conducted periodic meetings, correspondence and phone conversations with agencies involved in ISS-OE effort during the pilot phase. SED director of ISS-OE conducted numerous formal and informal conferences to inform other SED personnel of the ISS-OE effort.
		2. Plan pilot testing strategies including agency's role clarification and alternative approaches.	2. a) Were strategies prepared and executed? b) Was the role of each agency clarified? c) Were alternative approaches planned?	Expansion strategies were prepared and executed. Alternatives were used: -Additional Office Practice teachers were added to expand effort in that area -A second computer agency was employed to refine initial computer efforts.
		3. Prepare and execute State visitation plan by SED representatives.	3. Did SED representatives make appropriate visits?	SED representatives conferred with administrative personnel at all sites during the year. Representative met with all teachers and curriculum coordinators at first local regional meeting and visited teachers in their classroom and shop settings at this time. Occupational education directors, curriculum coordinators, and teachers indicated a need for more visits by SED representatives, especially during spring term.

CIOE	1. To pilot and test ISS-OE Curriculum Development System.	1. Monitor ISS-OE pilot effort in each local site.	1. Was ISS-OE Curriculum Development System tested?	CIOE representatives visited sites to monitor the ISS-OE effort.
		2. Coordinate inter-site and inter-regional development.	2. Were modules developed at summer workshop implemented and critiqued?	All automotive teachers utilized some or all of the modules developed during summer workshops.
			3. Were additional modules developed in each region?	With one exception, all Office Training teachers piloted the modules.
			4. Was there an inter-regional exchange of new modules, critiques, summaries and recommendations?	CIOE acted as clearinghouse for the dissemination of new modules and recommendations among the three regions.
	2. To explore expansion potential through in-service courses.	1. Conduct week-end college courses.	1. Were courses held? 2. What were the enrollments? 3. Did the courses show potential for expansion?	CIOE met this objective. Education 533X was offered at the Foreman Center for 16 students and at Suffolk County BOCES #3 for 20 students. Teachers from other occupational areas were successful in utilizing the ISS-OE format.
	3. To conduct process evaluation.	1. Make site visitations to monitor development.	1. Were sites visited?	CIOE met this objective.
		2. Develop and administer questionnaires by mail and interview.	2. Were questionnaires administered?	Questionnaires were developed and administered to teachers curriculum coordinators and occupational education directors.
		3. Compile and publish Status and Progress Reports.	3. Were reports published?	A Progress Report was prepared Oct. 31, 1975. Status Reports were issued on Nov. 7, 1975 and January 23, 1976.
RRI	1. To develop a workable student reporting system for the ISS-OE project as part of the total IFLS.	1. Develop and test the student reporting system. 2. Make the system workable in the public school setting.	1. Was the system developed and tested? 2. Was the system workable?	The RRI-IFLS system was produced and tested. However, teachers and curriculum coordinators felt the system was too cumbersome and time-consuming to be effective.

TEACHERS (in local school settings)	1. To test and modify the developed curriculum package in the local setting.	1. Implement the package in the local setting.	1. Were modules implemented?	All teachers were successful in meeting this objective. Existing modules were implemented and new modules were written and critiqued. The teachers were extremely cooperative to all agencies involved in this project.
	2. To write additional modules to produce complete package.	2. Meet with CIOE, RRI and SED personnel at their local setting.	2. Did teachers meet with CIOE, RRI, and SED personnel?	
		3. Develop additional modules.	3. Were new modules developed?	
		4. Critique modules in monthly and weekly meetings.	4. Were modules critiqued?	
CURRICULUM COORDINATORS	1. To serve as local managers for the ISS-OE project.	1. Assist and support teachers in the implementation phase in the local level	1. Was implementation accomplished?	Curriculum Coordinators met this objective. The package was implemented and new modules were written. Teachers received support and assistance in regional meetings. Twenty additional work sessions were held in each region. New modules were sent to CIOE promptly.
		2. Facilitate writing of new modules	2. Were new modules written?	
		3. Send new modules and recommendations to CIOE for distribution.	3. Were teachers' efforts supported?	
			4. Were new modules sent to CIOE?	

Recommendations

Recommendations for future implementation or adoption of the model by other agencies include the following:

- Roles, responsibilities, and activities of all participants and agencies must be completely delineated prior to implementation of the project. Key agents in the project are the curriculum coordinators who immediately direct on-site activity. Assurance must be made that their function in relation to ISSOE in no way militates against, but rather is supportive of their primary responsibilities in school districts.

- Every effort must be made to assure that lines of communication among all agents and participants remain open. Local administrative personnel must be kept directly informed as to exact project development which is to occur in their districts. Orientation of administrators, coordinators, and teachers prior to the start of curriculum development should be sufficiently in-depth and given early enough so that all know what to expect as the project evolves.

- Incorporation of a computerized retrieval system should be avoided in the first phase of curriculum package construction and trial of that package. Measurement of objectives should occur on the basis of finished, critiqued, and revised modules. Total efforts placed on product development should be accompanied by orientation to a support system in the first year of project activities. Only after product preparation and computer orientation should a support system begin a reporting function.

- Adaptation of a computer system developed for other purposes or other general areas of education should be avoided. The design of report forms and the type of data requested should be an immediate outgrowth of the information necessary for classroom teachers, curriculum coordinators, and State Education Department agents.

- Specialized training should be given to teachers in the areas of criterion referenced test development or the development of such tools delegated to professionals trained in this skill. A degree of expertise is needed in this regard which may not be reached by most teachers in intensive but brief workshop sessions.

- Administrative agents must be prepared to recognize and to cope with the natural resistance to change incumbent on the transition to any new system of classroom management, curriculum tool design, or reporting system. Teachers are in need of strong psychological support and encouragement in the face of the arduous work and radical changes necessitated by incorporation of this new teaching-learning mode.

APPENDICES

APPENDIX A

Guide
to the
Information Flow and Logistics Subsystem
to be
Used in the Fall, 1975 Field Testing
of Phase I
Instructional Support System in Occupational Education

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Introduction

During July of 1975, a group of carefully selected teachers and coordinators of occupational education gathered together at Cornell University to participate in a curriculum development workshop. This workshop, which focused on the areas of automotive mechanics and office training, led to the production of several modules of instruction in each of the fields concerned. The chief characteristics of these modules include the statement of specific performance objectives, suggested instructional activities, and clearly identified criterion-referenced measures for determining whether or not students have attained the stipulated objectives.

This first version of a modularized curriculum, generated as it was by experienced, knowledgeable classroom teachers, represents one of the two major components of the Instructional Support System which the Office of Occupational Education wishes to develop for eventual state-wide implementation.

The second major component of the ISS/OE is a set of procedures for handling the information that flows from the implementation of the curriculum.

The present guide is designed to help teachers understand and make the best use of this second component.

It should be borne in mind that both of these ISS components, as presently constituted, are first-phase developments. As they are used by teachers, feedback regarding elements that respond to needs, that appear to work well (and those that do not), will facilitate required revisions and refinements.

The field test phase which takes place in the fall of 1975 thus offers all participants an opportunity to continue their intimate involvement as planners, designers, and implementors of ISS. It will be the responses, reactions and evaluations of the participants which will determine the modifications and extensions that will be made in both the curriculum content and in the data flow and logistical support subsystem.

Foreword

This guide describes the information flow and logistics subsystem of ISS/OE. It contains samples of forms and outlines procedures to be used during the field trial in the fall of the 1975-1976 school year.

Developing Class Rosters

In order to utilize the computer in support of the classroom teacher, certain kinds of information must be obtained. The first of these is a list of students enrolled in each class. Once such a list has been acquired, the computer will print out a class roster, bearing student names, identification numbers, and other items that are essential to the information-handling process.

Figure 1 illustrates the form that teachers are asked to use in submitting their class lists.

It is to be noted that the form already contains a school code and a class number, both of which have been previously assigned and appear at the top of the page. Directly underneath these numbers is a place for the teacher to print his or her name, showing last name first, a comma, then the initial of his or her first name, e.g., JONES, M.

Having done this, the teacher is then asked to list in clearly legible fashion (preferably printed) the students in each of his or her ISS/OE classes. A separate form should be used for each class. Because the computer will automatically print the roster in alphabetical order, the teacher need not be concerned about so doing in compiling the class list.

For this roster building purpose, teachers are to use only the portion of the form cited thus far. They are to disregard the rest of the form which will be explained later in the guide.

SCHOOL: 311 CLASS: 10000

UPDATES TEACHER NAME _____ TEST REQUESTS

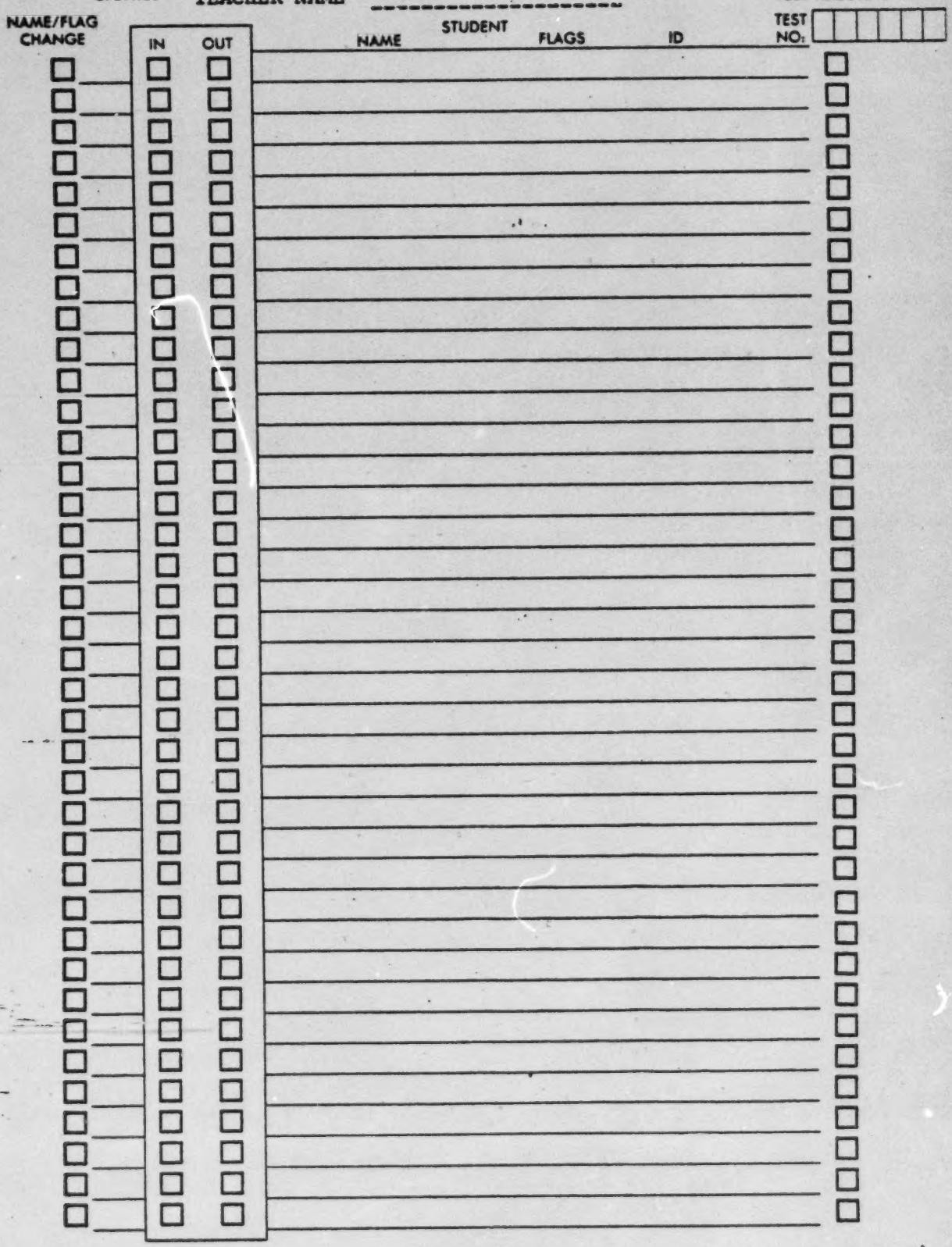

FIGURE 1

Once the forms have been completed, teachers are asked to forward them to their curriculum coordinator for transmittal to:

Miss Cynthia Jackson
Social Systems Division
Riverside Research Institute
80 West End Avenue
New York, N. Y. 10023

Forms should not be creased or folded.

Ten copies of each roster will be prepared by RRI and sent to the respective curriculum coordinator for distribution to the teachers concerned.

It is impossible to overemphasize the critical importance of insuring that the roster be complete and accurate for it is the roster which enables the computer to establish appropriate files and maintain accurate records of student performance and progress. Furthermore, it is the roster which serves as the basis for requesting student evaluation record sheets which will be discussed later.

Accordingly, any changes or modifications in the official class roster must follow the procedures described below.

Roster Changes

Teacher Actions

The form shown in Figure 2 is to be used for making a change in a roster. (This is the same form shown in Figure 1, but for changing rosters, a different part of the form is used.)

To indicate a change, the teacher places a check mark (√) under the column heading "Name/Flag Change," in the box which is on the same horizontal line as the name of the student involved in the change. In the case of a student's leaving the class, the teacher places a check mark in the "OUT" box next to the student's name. In the case of a student's entering the class, the teacher places a check mark in an "IN" box below the existing list of students' names and enters the new student's name next to the checked "IN" box.

Upon making these entries, the classroom teacher forwards the form to the curriculum coordinator of the center.

Curriculum Coordinator Actions

If the student shown on the form as entering or leaving a class is moving from, or to, another class within the same school, the coordinator utilizes the form shown in Figure 3 to indicate, by number code, the class left by the student in column one, "FORMER CLASS," and the class entered by the student in column three, "NEW CLASS."

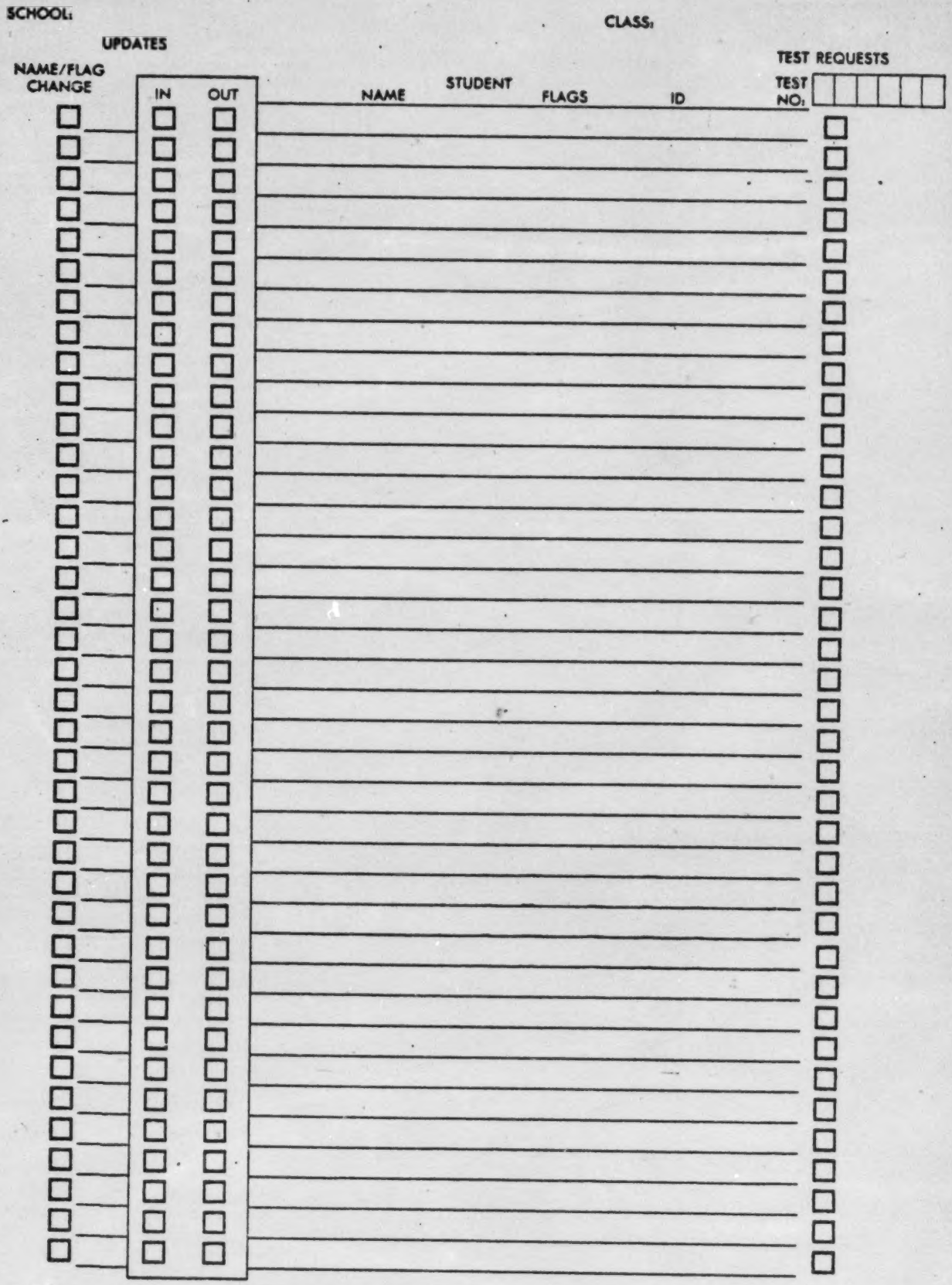
SCHOOL:
CLASS:
UPDATES
NAME/FLAG CHANGE
IN
OUT
STUDENT
NAME
FLAGS
ID
TEST REQUESTS
TEST NO:

FIGURE 2

(S)

SCHOOL UPDATES
(FORM #2A)

DATE _____

SCHOOL [ ]

C

1 FORMER CLASS	2 STUDENT CODE	3 NEW CLASS

INSTRUCTIONS:

EACH COLUMN IS NUMBERED (1 TO 3)

1. To CHANGE a class code, complete columns 1 & 3.
2. To CHANGE a student (to a new class in the same school), complete columns 1,2 & 3.

FIGURE 3

The coordinator enters the student's identification number in column two, "STUDENT CODE." He also enters the school code and date of the change at the top of the form and then forwards the completed form to Miss Jackson at RRI.

If the student has transferred from, or to, a school within the same administrative jurisdiction (BOCES or City District, e.g.) the student's original identification number must be determined so that it can continue to be used. If, however, the student has transferred into the District, from outside the BOCES or City, a number will be assigned to him by the computer. If the student has transferred out of the BOCES or City District, his number will be inactivated by the computer.

To handle these kinds of "adds" or "deletes," the coordinator uses the form shown in Figure 4.

The coordinator dates the form and indicates the type of transfer by using code letters A, D or C in column one. Code letter A (for "add") indicates a student has transferred into the District (BOCES or City) from an outside school. Code letter D (for "delete") indicates the student has transferred to a school outside the District (BOCES or City). Code letter C (for "change") indicates the student has changed schools within the District (BOCES or City).

For a student new to the District, the coordinator enters the student's new school in column two, new class in

(Y)

INTER-SCHOOL UPDATES

(FORM #7)

DATE _____

1 UPDATE	2 SCHOOL	3 CLASS CODE	4 STUDENT CODE	5 NEW SCHOOL	6 NEW CLASS	7 NEW NAME (LAST, INIT)	8 NEW FLAGS

INSTRUCTIONS:

EACH COLUMN IS NUMBERED: (1 TO 8).

1. To DELETE a student (left the district), code a 'D' in column 1 & complete columns 2,3 & 4.
2. To ADD a student (new in the district), code an 'A' in column 1 & complete columns 2,3,7 & 8.
3. To CHANGE a school number for a class (error in school code), code a 'C' in column 1 & complete columns 2,3 & 5.
4. To CHANGE a student (to a new school & class within the district), code a 'C' in column 1 & complete columns 2,3,4,5 & 6.

FIGURE 4
52

column three, and name (last name, then first initial) in column seven. For a student leaving the District, the coordinator enters the student's former school in column two, former class in column three, and identification number in column four. For a student changing schools within the District, the coordinator enters the student's former school in column two, former class in column three, identification number in column four, new school in column five, and new class in column six.

Upon completing this form, the coordinator forwards it to RRI for entry into the computer.

Other Changes and Corrections

Student Names

Using the same form (see Figure 5) which carries the class roster, teachers can correct misspellings of student and teacher names. To make a student name change, the teacher places a check mark (√), under the column heading "Name/Flag Change" in the box next to the name to be corrected. The teacher then runs a single line through the incorrectly spelled name and prints the correct version directly below it. In making a correction of the spelling of his or her name, the teacher merely runs a single line through the improperly spelled name and prints the correct version directly above it.

The teacher then forwards the corrected form to the curriculum coordinator for transmittal to RRI.

Class Codes

A teacher or coordinator may notice that a class code is incorrect. In such a case, he or she uses the form shown in Figure 6 to correct the class code. (This is the same form shown in Figure 3 for use in resolving "adds" or "deletes" within a school.)

Corrections are made by entering the former, incorrect code in column one, and entering the new, correct code in column three. (Column two is left blank.)

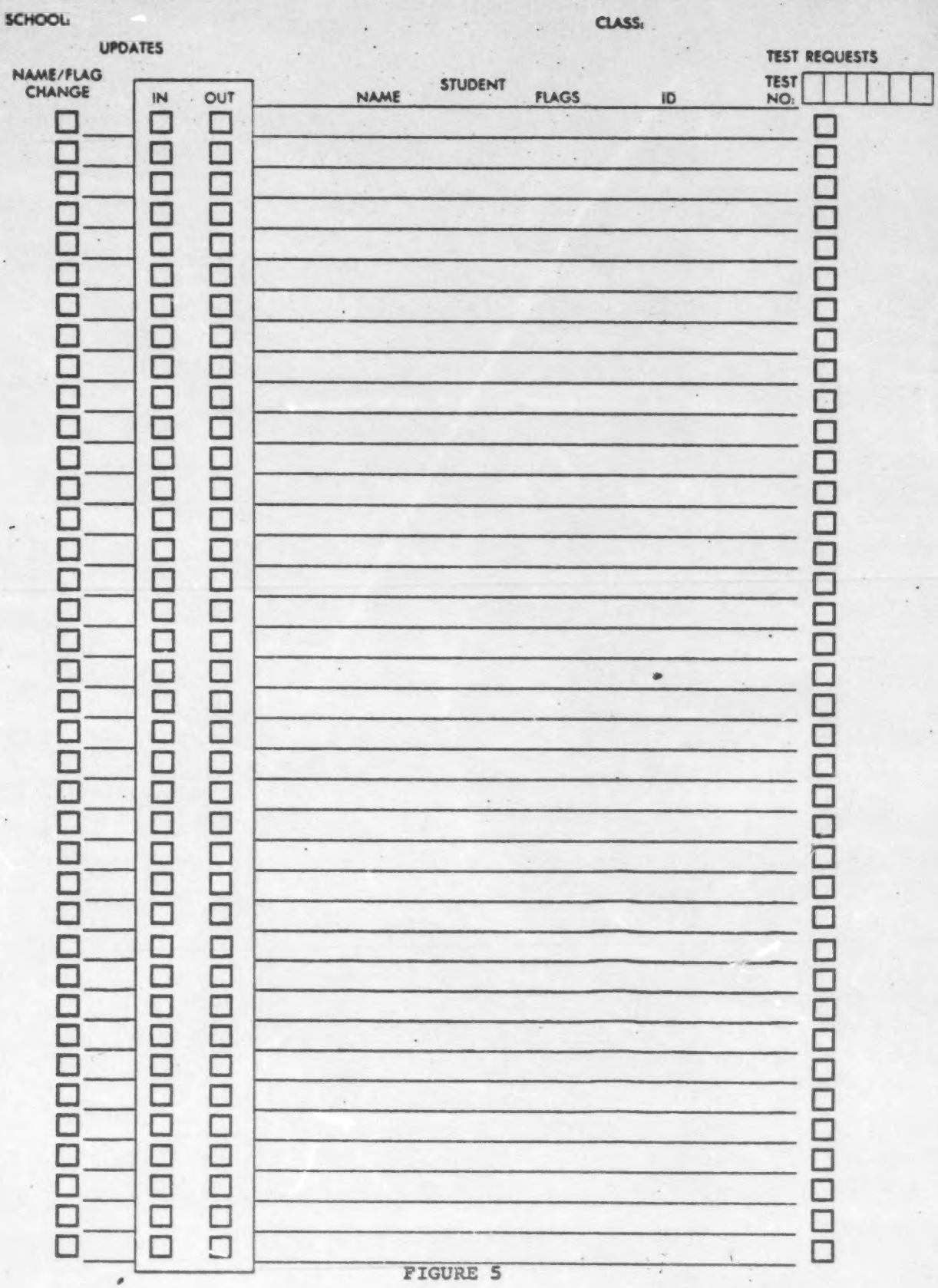
SCHOOL:
CLASS:
UPDATES
NAME/FLAG CHANGE
IN
OUT
STUDENT
NAME
FLAGS
ID
TEST REQUESTS
TEST NO:

FIGURE 5

(S)

SCHOOL UPDATES

DATE _____

SCHOOL [ ]

C

1 FORMER CLASS	2 STUDENT CODE	3 NEW CLASS

INSTRUCTIONS:

EACH COLUMN IS NUMBERED (1 TO 3)

1. To CHANGE a class code, complete columns 1 & 3.
2. To CHANGE a student (to a new class in the same school), complete columns 1,2 & 3.

FIGURE 6

The completed form is then forwarded by the coordinator to Miss Jackson at Riverside.

School Codes

A teacher or coordinator may notice that a school code is incorrect. In such a case, he or she uses the form shown in Figure 7 to correct the school code. (This is the same form shown in Figure 4 for use by the coordinator in resolving "adds" or "deletes" involving transfers between schools.)

Corrections are made by entering the code letter C in column one, the incorrect school code in column two, each class given the incorrect school code in column three, and the correct school code in column five.

Once again the completed form is sent by the coordinator to RRI.

(Y)

INTER-SCHOOL UPDATES

(FORM #7)

DATE _____

1 UPDATE	2 SCHOOL	3 CLASS CODE	4 STUDENT CODE	5 NEW SCHOOL	6 NEW CLASS	7 NEW NAME (LAST, INIT)	8 NEW FLAGS

INSTRUCTIONS:

EACH COLUMN IS NUMBERED: (1 TO 8).

1. To DELETE a student (left the district), code a 'D' in column 1 & complete columns 2,3 & 4.
2. To ADD a student (new in the district), code an 'A' in column 1 & complete columns 2,3,7 & 8.
3. To CHANGE a school number for a class (error in school code), code a 'C' in column 1 & complete columns 2,3 & 5.
4. To CHANGE a student (to a new school & class within the district), code a 'C' in column 1 & complete columns 2,3,4,5 & 6.

FIGURE 7

Requesting Student Evaluation Record Sheets

In order to record student attainment or non-attainment of objectives, teachers must use the appropriate evaluation record sheets (see sample in Figure 8 and discussion below). These record sheets should be requested sufficiently early to allow time for U.S. Mail delivery from Riverside before the anticipated testing or evaluation date. (A minimum of a week to 10 days is suggested.)

To obtain record sheets, the teacher uses the computer-printed, most recent version of his or her class roster. The teacher enters the code number of the requested evaluation record sheet at the upper right-hand section of the form. (Code numbers for evaluation record sheets correspond to the "module/unit" codes which appear in the curriculum guide and in Appendix B in the back of this guide.) The instructor then places a check mark (√) in the box next to the name and ID number of each student to be evaluated.

When this request form is completed, the teacher, through the coordinator, forwards it to RRI. It must be noted that evaluation record sheets may be requested only for students whose names appear on the pre-printed computer roster. Before an evaluation record sheet can be obtained for a student not listed on the class roster, the teacher must carry out the procedures described above relating to the addition of students.

MOD/UNIT CODE | ID | STUDENT | CLASS | SCHOOL

STUDENT EVALUATION RECORD SHEET

FIELD TEST

ISS - OCC ED

FIRST PHASE

DIRECTIONS TO INSTRUCTOR: THE NUMBERS BELOW CORRESPOND TO THE NUMBERS OF PERFORMANCE EVALUATION ITEMS IN THE COLUMN LABELLED "EVALUATION" FOUND IN YOUR CURRICULUM GUIDE. WHEN THIS MODULE/UNIT IS COMPLETED, MARK EITHER YES OR NO FOR THE APPROPRIATE ITEMS BELOW, INDICATING THAT THE STUDENT NAMED ABOVE HAS OR HAS NOT MET EACH PERFORMANCE OBJECTIVE. PLEASE FILL EACH BOX COMPLETELY, USING A #2 PENCIL.

1.	YES ☐	NO ☐	17.	YES ☐	NO ☐	33.	YES ☐	NO ☐
2.	YES ☐	NO ☐	18.	YES ☐	NO ☐	34.	YES ☐	NO ☐
3.	YES ☐	NO ☐	19.	YES ☐	NO ☐	35.	YES ☐	NO ☐
4.	YES ☐	NO ☐	20.	YES ☐	NO ☐	36.	YES ☐	NO ☐
5.	YES ☐	NO ☐	21.	YES ☐	NO ☐	37.	YES ☐	NO ☐
6.	YES ☐	NO ☐	22.	YES ☐	NO ☐	38.	YES ☐	NO ☐
7.	YES ☐	NO ☐	23.	YES ☐	NO ☐	39.	YES ☐	NO ☐
8.	YES ☐	NO ☐	24.	YES ☐	NO ☐	40.	YES ☐	NO ☐
9.	YES ☐	NO ☐	25.	YES ☐	NO ☐	41.	YES ☐	NO ☐
10.	YES ☐	NO ☐	26.	YES ☐	NO ☐	42.	YES ☐	NO ☐
11.	YES ☐	NO ☐	27.	YES ☐	NO ☐	43.	YES ☐	NO ☐
12.	YES ☐	NO ☐	28.	YES ☐	NO ☐	44.	YES ☐	NO ☐
13.	YES ☐	NO ☐	29.	YES ☐	NO ☐	45.	YES ☐	NO ☐
14.	YES ☐	NO ☐	30.	YES ☐	NO ☐	46.	YES ☐	NO ☐
15.	YES ☐	NO ☐	31.	YES ☐	NO ☐	47.	YES ☐	NO ☐
16.	YES ☐	NO ☐	32.	YES ☐	NO ☐	48.	YES ☐	NO ☐

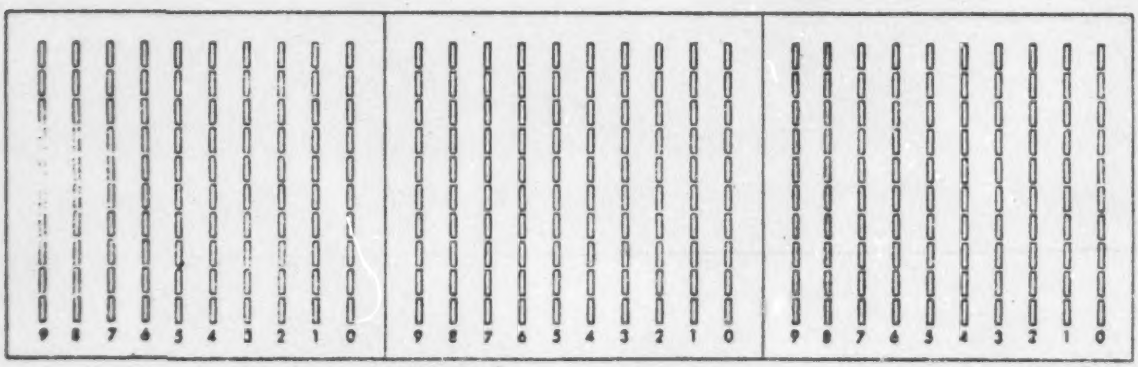

FIGURE 8

78

FORM NO. 9041

As seen in Figure 8, the evaluation record sheet is pre-printed by the computer to show at the top of the page: the module/unit code, the student's identification number, the student's name, the class code and the school code.

It is imperative that the appropriate record sheet be used for the student whose name appears on it.

Transmitting Student Evaluation Record Sheets

The teacher's instruction may cover all, or only some, of the Student Performance Objectives of a module/unit for one or more students. Furthermore, the instruction for the complete or partial module/unit may extend over a relatively short period of time (e.g., two to three weeks) or be spread out over a longer period (perhaps an entire semester) -- probably because other total or partial module/units are interspersed.

For many students there is motivational value in having a written record of accomplishment as their work proceeds. (Within a week after Riverside Research Institute receives a Student Evaluation Record Sheet, an individualized report form for each student will be returned to the teacher.) Therefore, whether the teacher plans to cover all or only some of the Objectives of a module/unit,

a) if the instruction occurs over a short period of time, the Record Sheet for each student who has received instruction and has been tested or evaluated should be transmitted at the end of this short period;

b) if the instruction is being spread over a long period, the Record Sheet for each student who is receiving instruction on the module/unit should be transmitted periodically (e.g., monthly), even if the student has attained only one objective during that time.

Evaluation Record Sheets should be sent to the ISS/OE coordinator for forwarding to the Riverside Research Institute. Please do not fold or staple these forms.

Changes in Student Records

In the event that a teacher wishes to change a student's record of mastery without retesting (e.g. the teacher wishes to change the record to read that a student now has achieved mastery of an item or items for which non-mastery had been reported), he or she uses the form shown in Figure 9.

In using the form shown in Figure 9, the teacher enters the date of the change, school code and class code at the top of the form. Then the teacher enters the identification number for each student whose record is to be changed, the module/unit code of the evaluation record sheet on which the non-mastered objective was originally indicated, the date on which the initial evaluation occurred, and the objectives for which the record is to be changed.

Attention is called to the fact that the date of the initial evaluation is reported in the order of year, month, and day.

Upon completion, the teacher forwards the form to RRI.

If the situation is one in which the teacher wishes to delete an entire evaluation report from the record, the teacher so notifies the curriculum coordinator who then reports the matter to RRI using the form shown in Figure 10.

The coordinator first enters the date of the change, school code, class code, student ID number, date of reporting the initial evaluation results, and the code number of the module/unit evaluation record involved. He then forwards the completed form to RRI.

PROFESSIONAL JUDGEMENT - OBJECTIVE MASTERY

(FORM #3)

DATE _____

SCHOOL [ ] CLASS [ ]

STUDENT CODE	MODULE/UNIT CODE	EVALUATION DATE			OBJ NO.	OBJ NO.	OBJ NO.	OBJ NO.	OBJ NO.	OBJ NO.	OBJ NO.	OBJ NO.
		YR	MO	DY								

FIGURE 9

PURPOSE: TO UPDATE PUPIL MASTERY OF OBJECTIVES WITHOUT RETESTING

INSTRUCTIONS: YOU MUST COMPLETE THIS FORM BY MODULE/UNIT CODE.
[illegible] THE OBJECTIVE NUMBER(S) THE PUPIL HAS MASTERED WITHOUT FORMAL RETESTING. USE THE [illegible] TO COMPLETE ALL INFORMATION. REPORT ONLY THOSE OBJECTIVES THE PUPIL DID [illegible] ON THE INITIAL TESTING.

Ⓨ

STUDENT MASTERY RECORD DELETES

DATE _____

(FORM #6)

D

1 SCHOOL CODE	2 CLASS CODE	3 STUDENT CODE	4 DATE MO	DY	YR	5 MODULE/UNIT CODE

FIGURE 10

Computer Printouts

Using the present ISS software, several reports can be produced for the classroom teacher following each module/unit evaluation. For illustrative purposes, two of these are described below.

End-of-Module/Unit Evaluation

The results of each module/unit evaluation are displayed for the set of students tested on a computer printout having the form shown in Figure 11.

The date of the report, title, page number, school code, class code, and module/unit code, are all printed at the top.

The first column in the body of the sample printout contains student names; the second, student I.D. number; the third and fourth, each student's performance for each of the objectives tested.

Performance is indicated by a + or -, and by a fraction. The + indicates mastery; the - indicates non-mastery. If the fraction, which is related to the performance criterion for the objectives, is equal to 1, mastery is indicated. A fraction of less than 1 shows non-mastery.

Below these columns, the number of students achieving each objective is printed. Below these, the number of students taking the test is printed.

08/13/75 END OF MODULE TEST RESULTS PAGE 1

SCHOOL 276 PERIOD GR 6 RM 209 CLASS 11312 MODULE 410011

STUDENT	STUDENT NO.	OBJECTIVES 0001	0002	ITEM RATIO	OBJ RATIO
BOUTON, N	232409	+4/3	-2/3	6/ 8	1/ 2
NOWLS, L	232427	+4/3	+4/3	8/ 8	2/ 2
PENZINER, L	232459	+4/3	+4/3	8/ 8	2/ 2
CURTIS, R	232463	+4/3	-2/3	6/ 8	1/ 2
ADRAGNA, J	232477	-2/3	+4/3	6/ 8	1/ 2
CORONADO, L	232481	+3/3	+4/3	7/ 8	2/ 2
OVED, B	232566	+4/3	+4/3	8/ 8	2/ 2
SKYDELL, G	232584	+4/3	+3/3	7/ 8	2/ 2
RAND, I	232605	+4/3	+3/3	7/ 8	2/ 2
PERLMAN, J	232623	+4/3	+3/3	7/ 8	2/ 2
MARCUS, J	232641	+4/3	+3/3	7/ 8	2/ 2
GUTTENBERG, M	232655	+4/3	+4/3	8/ 8	2/ 2
WEISENFELD, S	232669	+3/3	-1/3	4/ 8	1/ 2
HOROWITZ, M	232687	+3/3	-2/3	5/ 8	1/ 2
HANZILAY, T	232691	+3/3	+3/3	6/ 8	2/ 2
BOSCO, R	232708	+4/3	+4/3	8/ 8	2/ 2
GALANTE, T	232712	+3/3	+4/3	7/ 8	2/ 2
ZEBERSKY, D	232726	+1/3	-1/3	4/ 8	1/ 2
RUDOLPH, L	232730	+3/3	-2/3	5/ 8	1/ 2
BUCHMAN, S	232744	-2/3	+3/3	5/ 8	1/ 2
BEROTA, M	232758	+4/3	+4/3	8/ 8	2/ 2
FLITT, A	232762	+4/3	+4/3	8/ 8	2/ 2
NICASTRO, D	232776	+4/3	+4/3	8/ 8	2/ 2
SCHWARTZ, A	232780	+4/3	+3/3	7/ 8	2/ 2
MANGONE, V	258106	+4/3	+4/3	8/ 8	2/ 2
TOTAL PASSING		23	19		
TOTAL STUDENTS		25			

FIGURE 11

Two columns at the right of the printout, labeled "ITEM RATIO" and "OBJ RATIO," display aggregated data in fractional form. For each student taking the test, the "ITEM RATIO" column displays the total number of items answered correctly above the total number of items on the test. Similarly, for each student taking the test, the "OBJ RATIO" column displays the total number of objectives mastered above the total number of objectives on the test.

Student Report

The student report is intended for teacher information and records, but can also be used to advise parents, guidance counselors and others of the student's achievement in pursuit of performance objectives.

Examples of the student report are shown in Figure 12.

The printout displays student name, school, class and report date at the top. The body of the report lists the code and description of both the module/unit and its performance objective(s). Mastery for an objective is shown by the word "YES" displayed under the column heading "Mastered," to the right of the objective code; a blank space in this position indicates non-mastery. In addition, the number of items correctly answered and the number of correct answers required for mastery are also displayed for each objective.

BOUTON, M SCHOOL 276 CLASS 13312 PERIOD GR 4 RM 209 08/13/75 PAGE 4

	OBJECTIVE	MASTERED	ITEMS CORRECT	ITEMS NEEDED
410011 FOURTHS & EIGHTHS OF AN INCH				
4100101 DETERMINE HOW MANY FOURTHS IN 1IN,2 1/2IN ETC	0001	YES	4	3
4100102 DETERMINE HOW MANY EIGHTHS IN 1IN, 2 1/2IN, ETC	0002		2	3

HOWES, E SCHOOL 276 CLASS 13312 PERIOD GR 4 RM 209 08/13/75 PAGE 5

	OBJECTIVE	MASTERED	ITEMS CORRECT	ITEMS NEEDED
410011 FOURTHS & EIGHTHS OF AN INCH				
4100101 DETERMINE HOW MANY FOURTHS IN 1IN,2 1/2IN ETC	0001	YES	4	3
4100102 DETERMINE HOW MANY EIGHTHS IN 1IN, 2 1/2IN, ETC	0002	YES	4	3

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	OBJECTIVE	MASTERED	ITEMS CORRECT	ITEMS NEEDED
410011 FOURTHS & EIGHTHS OF AN INCH				
4100101 DETERMINE HOW MANY FOURTHS IN 1IN,2 1/2IN ETC	0001	YES	4	3
4100102 DETERMINE HOW MANY EIGHTHS IN 1IN, 2 1/2IN, ETC	0002	YES	4	3

FIGURE 12

ISSOE PUPIL FILE[1]

School & Code		Number of Classes	Number of Teachers	Number of Pupils
Dutchess County OE Center	(311)	7	3	124
Orange County OE Center	(411)	6	3	114
No. Westchester Tech. Center	(511)	10	5	200
Foreman Area Ed. Center	(611)	11	6	180
Charlotte High School, Rochester	(711)	2	1	35
Marshall High School, Rochester	(712)	6	3	115
Edison Tech. High School, Rochester		2	1	46
Automotive Annex, Rochester	(714)	2	1	29
Nassau Co. S. W. Center	(811)	2	1	48
Nassau Co. S. E. Center	(812)	1	1	28
Nassau Co. N. E. Center	(813)	2	1	45
Nassau Co. N. W. Center	(814)	2	1	48
TOTALS 12		53	27	1,012

[1]This file indicates the number of students registered in the program. Information on progress achievement varies depending on input from each region.

APPENDIX B

Sample Modules

Automotive Mechanics: Lubrication Service

Office Training: Mail Handling

COURSE: Auto Mechanics
UNIT: INTRODUCTION TO AUTO MECHANICS
CODE: 17320107

MODULE: LUBRICATION SERVICE
TASK: Change Engine Oil and Filter

MAJOR OBJECTIVE

01 Given an operational engine with oil, oil filter, necessary tools and materials, the student will:

- . drain the engine oil
- . remove old oil filter
- . prepare gaskets and gasket surfaces
- . install new engine oil and oil filter
- . check for leaks
- . complete the task in twice the flat rate time.

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ENABLING OBJECTIVES	SUGGESTED INSTRUCTIONAL CONTENT
Given an operational engine with oil, oil filter, necessary tools and materials, the student will: . identify the various types and grades of oil . identify the types of oil filters . identify the various types and uses of drain plugs . display an understanding of how to replace a stripped oil pan drain plug.	Demonstration: . Draining and refilling crankcase . Removing oil filter . Using special tools . Preparing and installing new oil filter Information: . Types of oils . Types of oil filters . Special tools . Types of drain plugs . Use of manuals

CRITERION-REFERENCED MEASUREMENT SHEET

NAME _____ DATE _____

TEACHER _____ CLASS _____

MODULE: LUBRICATION SERVICE 17320107

MAJOR OBJECTIVE: 01

Given an operational engine with oil, oil filter, necessary tools and materials, the student will:

- . drain the engine oil
- . remove old oil filter
- . prepare gaskets and gasket surfaces
- . install new engine oil and oil filter
- . check for leaks
- . complete the task in twice the flat rate time.

CHECK ONE ONLY

MET MAJOR OBJECTIVE []

NEEDS FURTHER INSTRUCTION []

REMARKS:

Did student, when applicable:

1. Observe safety standards? _____
2. Use trade acceptable standards? _____
3. Meet manufacturer's specs? _____
4. Use proper procedure? _____
5. Use proper tools? _____
6. Observe good housekeeping practices? _____
7. Complete necessary paper work? _____
8. Complete the job in an acceptable time period based on flat rate time? _____

COURSE: Auto Mechanics
UNIT: INTRODUCTION TO AUTO MECHANICS
CODE: 17320107

MODULE: LUBRICATION SERVICE
TASK: Lubricate Chassis

MAJOR OBJECTIVE

02 Given a car, lift, high pressure chassis lubricator, necessary tools and lubrication manuals, the student will:

- . lubricate the car's chassis and related body parts as indicated in the lubrication manuals
- . visually inspect all points to be certain they are properly lubricated
- . check all fluid levels and bring all fluids up to proper level
- . accurately complete the necessary paperwork
- . complete the task according to mfg. specs., in twice the flat rate time.

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ENABLING OBJECTIVES	SUGGESTED INSTRUCTIONAL CONTENT
Given a car, lift, lubrication manual, necessary tools and equipment, the student will: . demonstrate an understanding as to the use of lubrication manuals . identify the various types of lubricants . identify the various types of lubricating equipment . list the proper lubrication procedure . identify the various lubrication points, both chassis and body . identify and complete the supporting paperwork.	Demonstration: . Proper procedure for lubricating a car's chassis and body parts . Location of various filler plugs . Location of various level indicators Information: . Various level checking procedures . Types of lubricants . Types of lubrication equipment . Use of lubrication manuals . Lubrication procedures . Related safety . Supporting paperwork

CRITERION-REFERENCED MEASUREMENT SHEET

CHECK ONE ONLY

NAME _____ DATE _____ MET MAJOR OBJECTIVE []

TEACHER _____ CLASS _____ NEEDS FURTHER INSTRUCTION []

MODULE: LUBRICATION SERVICE 17320107 REMARKS:

MAJOR OBJECTIVE: 02

Given a car, lift, high pressure chassis lubricator, necessary tools and lubrication manuals, the student will:

- lubricate the car's chassis and related body parts as indicated in the lubrication manuals
- visually inspect all points to be certain they are properly lubricated
- check all fluid levels and bring all fluids up to proper level
- accurately complete the necessary paperwork
- complete the task according to mfg. specs., in twice the flat rate time.

Did student, when applicable:

1. Observe safety standards? _____
2. Use trade acceptable standards? _____
3. Meet manufacturer's specs? _____
4. Use proper procedure? _____
5. Use proper tools? _____
6. Observe good housekeeping practices? _____
7. Complete necessary paper work? _____
8. Complete the job in an acceptable time period based on flat rate time? _____

COURSE: Office Training
UNIT: Communication Skills
CODE: 14330203

MODULE: Mail Handling
TASK: 01 Process incoming and outgoing communications and materials

MAJOR OBJECTIVE

01 Given a written test the student will demonstrate the ability to expedite delivery of communications and materials by completing the test with 80% accuracy within 30 minutes.

ENABLING OBJECTIVES

Incoming mail
The student will sort, open, date-stamp, check, and route incoming mail.

Outgoing mail
The student will check and prepare correspondence and materials for outgoing mail.

Maintain records
The student will keep necessary correspondence records.

Mail classes and services
The student will identify classes of mail and special services of the postal office and indicate appropriate use of each.

Shipping services
The student will identify shipping services and indicate appropriate use of each.

Postal references
The student will use postal references.

Postal equipment
The student will identify office equipment used to prepare mail for posting.

SUGGESTED INSTRUCTIONAL CONTENT

Vocabulary
correspondence/materials register
under separate cover
opening, scanning, annotating, routing mail
classes of mail
girth
parcel post zones
special delivery
registered mail
certified mail mailgram
return receipt requested
special handling
bulk rate
sorting, bundling, facing
optical scanner
zip code
zip code directory
mass mailings
chain feeding
postal scale
postage meter
addressograph
shipping guides and services
terminal
mailing lists
international and domestic mail

MODULE: Mail Handling

TASK(S): 01 Process incoming and outgoing communications and materials

NAME: _____

SECTION: _____

DATE: _____

CRITERION-REFERENCED MEASUREMENT

1. You are asked to prepare the following items for mailing. In order to correctly determine mailing cost of each item, you must determine the class of mail to which the item belongs and decide which special services you require. Indicate the class of mail for each item by writing a letter from Column I in the space provided; indicate any special service(s) by writing the appropriate letter(s) from those listed in Column II.

Column I - Classes of Mail	Column II - Special Services
a) first class	f) special delivery
b) second class	g) special handling
c) third class	h) registered
d) fourth class (parcel post)	i) certified
e) mixed	j) insured
	k) C.O.D.

		Column I	Column II
1.	Final notice of overdue payment--proof of delivery	_____	_____
2.	Carbon copy of letter--regular delivery	_____	_____
3.	Company postcard confirming appointment	_____	_____
4.	Company catalog weighing 3 oz.	_____	_____
5.	Shampoo sample, weighing 1 oz.	_____	_____
6.	Signed contract	_____	_____
7.	Stock certificates valued at $5,000	_____	_____
8.	Copy of SEVENTEEN magazine	_____	_____
9.	Mail order merchandise weighing 2 lbs. not paid for in advance	_____	_____
10.	Book with bill attached to package	_____	_____
11.	Letter to be delivered to addressee immediately upon receipt at addressee's post office	_____	_____

II. For each of the following situations, select the term or phrase which best completes the statement, and write the letter which precedes it in the space provided.

_____ 1. Your employer neglected to sign a check requiring his signature attached to an outgoing letter. You would:

a. sign his name
b. send it unsigned
c. return it to him later

_____ 2. You are enclosing material in an envelope which seems unusually heavy. Correct postage can be determined:

a. on an addressograph machine
b. on a postage scale
c. by calling the post office

_____ 3. A customer reports he did not receive a contract. Your records indicate it was mailed. Which of the following Post Office services would you employ?

a. certified mail
b. recall mail
c. trace mail

_____ 4. To locate the zip code of the State Education Department, located on Washington Avenue, Albany, NY, in the ZIP Code Directory, the first item you would locate is:

a. Albany
b. New York
c. Washington Avenue

_____ 5. On scanning an incoming letter, you note that the enclosure indicated does not accompany the letter. You would:

a. let your boss handle it
b. note the omission on the letter
c. call the police

_____ 6. By accident you open a personal letter addressed to your employer. You should:

a. reseal or tape the letter and make no mention of your mistake
b. discard the letter because it is non-business related
c. replace the letter in the envelope and attach a note explaining your error

_____ 7. The most efficient way of circulating an incoming routine memo addressed to five people is:

a. post it on the bulletin board
b. attach a routing slip
c. duplicate the memo and send each person his own copy

_____ 8. If your employer's mail included the following items, which should be placed in first order to get his attention?

a. interoffice memo
b. trade journal
c. special delivery letter

_____ 9. In a zip code such as 14622, the last two numbers (22) represent:

a. local postal zone
b. city or sectional center
c. national postal zone

_____ 10. The most efficient way of mailing monthly statements (bills) would be:

a. type an envelope for each statement
b. type an address label and attach to an envelope for each
c. enclose each in a window envelope

III. Select the most efficient and economical method of shipping the following items. Write your choice in the space provided.

_____ 1. An electric typewriter weighing 30 lbs. being shipped to a newly opened branch office 75 miles away.

a. Air Express
b. Parcel Post
c. UPS

_____ 2. A steel safe weighing 300 lbs. being shipped to a customer 1800 miles away--speed of delivery not essential. Private delivery to and from a terminal is available if needed.

a. Bus
b. Air
c. Truck

_____ 3. A designer's just-completed fashion line to meet a manufacturer's deadline with 24 hours, to a city 600 miles away.

a. Air Freight
b. Air Express
c. Bus

_____ 4. Your are sending a supply of catalogs and stationary to your London, England office. If cost rather than speed of delivery is more important, you would send the materials:

a. Air Freight
b. Air Express
c. Boat

_____ 5. Magnetic tapes requiring controlled temperature environment must be transported by:

a. Bus
b. UPS
c. Air

****

Did the student complete the test on mail handling with 80% accuracy within 30 minutes?

[] Yes [] No

Comments:_____

_____

_____

_____

_____

_____

APPENDIX C

ISSOE TERMINAL

MANUAL

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INTRODUCTION

For those who may not be familiar with an instructional support system, it may be well to devote these first few words to what it is, how it works, and what one might expect to get out of it. First of all, it should be thought of as a tool to help keep track of where each individual student is, within a certain curriculum. It is hoped that any given subject matter being taught can be structured into a modularized set of units, each of which has a pre-defined attainment criteria. If a teacher can keep track of each student's progress through these modules, then perhaps the job of managing the classroom can be made easier. There is not so much difference, then, from the standard way in which most teachers keep some sort of progress notebook for the students in the class. The difference lies mostly in complexity, and hence the need for assistance in the form of an instructional framework.

The instructional support system, then, is designed to help keep track of student progress, reporting this information to both the teacher and the student on at least a weekly basis. A report may reflect, for instance, that all students in a class are having difficulty with a certain module or topic. This information could then be used to help structure the class instruction. The student, hopefully, will find the reports given to him to be useful in reflecting his own

progress, and pointing out to him areas where he might devote more work.

A further aspect of an instructional support system is that it should be able to generate longitudinal reports at the end of a particular period, thus relieving the teacher of such work. Once it has been entered, evaluation data is stored within the system, so that the teacher does not have to worry about such record keeping functions. All of this is aimed at improving the information obtained on student performance while reducing the clerical workload of the teacher.

There are two problems with trying to establish a set of course modules and topics. First, it would be very difficult to keep track of the data which is needed to evaluate each individual student. Using such a system manually would place a heavy burden on each teacher. There must be, therefore, new ways for the teacher to manage data which reflects student growth. Such problems are more and more being solved by the use of computers, which are very good at storing and processing data. Computers, however, have a special knack of being so complex and difficult to use that they often end up being more frustrating than helpful. This manual will introduce a new way of using a computer, and hopefully it will be sufficiently easy to use that it can open up the possibilities of more efficient classroom management.

The way in which you will use the system described in this manual is not all that different from a system you may already be using. Depending on your past experience, you may or may not be happy to hear that there are a certain number of forms to be filled out. Frankly, there is no way around this. Every effort has been made, however, to reduce the number of forms needed, as well as the complexity of each form. There is a good deal of flexibility in what you may wish to include or leave out of the forms used. The bare minimum for any sort of student evaluation system are regular teacher reports, which involve, in this case, a report on each student for the module being taught. A module consists of a number of topics, and each topic can contain a number of items. Thus one can envision, within an office training course, a module concerning adding machines which contains four topics covering identification of parts, adding digits, subtracting digits, and multiplying digits. Each topic could have several evaluation items with which to measure performance. These items could either be direct performance measures or they could be subjective evaluations made by the teacher.

Every time a student completes the material of a module he should be evaluated on that module. This simply means filling out a short form for each student, indicating whether or not he has successfully mastered the items within the module. The only other information which you may wish to

provide is your class list, with the student names and identification numbers. These numbers can either be those used by the school for the students enrolled, or they can be numbers you generate yourself. If you use your own numbering system, then you would be the only person with that list. Once the class list has been entered it need not be re-entered or altered unless a student leaves or enters the class, or a change in spelling or numbering is desired. With the class list on file the reports will not only be more personal, but they will be easier to keep track of and hand out to the students. All of this is designed to be used just as you would if you did your own scoring and reporting.

Each region participating in this program is represented by a Curriculum Coordinator. In most cases it will be his responsibility to order the evaluation reports. Any information which has been submitted up to that point, since the last reports, will be included in the current reports. The most likely cycle would be a generation of reports at the end of each week and, depending on the installation, results would be returned the following week or the next day. In this way the results can be used in an on-going way in helping to determine the lesson plans.

THE TERMINAL

Instead of using paper forms, with the associated problems of ordering, mailing, and possible loss, we will use a device called a terminal, which looks very much like a small television set. Forms which are to be filled out appear on the screen, on request, just as they do on paper, with instructions and identifying labels, and areas to be filled in. The Module Evaluation Form, for instance, appears on the screen as it looks on the following page. It should be clear what is to be entered, and where. In filling out the form, you use a device which looks like a typewriter keyboard attached to the terminal. It has all the numeric and alphabetic keys which you are used to, plus a few special ones you will soon get used to. The terminal is connected to a central computer by means of standard telephone lines, using the procedures outlined in Appendix A. After you connect the terminal, you may enter evaluation results, names, roster changes, and even comments and suggestions. This section of the manual will be devoted to how the terminal is used to do these things. Although the instructions may at first seem complicated, they should soon make reasonable sense.

Before going further we should have an idea of what the structure of the system looks like. Instead of placing

MODULE EVALUATION FORM

DATE ----------: :---(MMDDYY)-----
CLASS ----------: :----------
COURSE ----------: :----------
UNIT ----------: :----------
MODULE ----------: :----------
STUDENT IDENTIFICATION -------: :----------
STUDENT NAME (OPTIONAL) : :---

****ITEM EVALUATIONS: ENTER "Y", "N" OR "U" IN GROUPS OF 4***

01-04:	05-08:	09-12:	13-16:	:-
17-20:	21-24:	25-28:	29-32:	:-
33-36:	37-40:	41-44:	45-48:	:-
49-52:	53-56:	57-60:	61-64:	:-

COMMENTS--: :----
COMMENTS--: :----

paper forms into some folder or file, the information which is entered into a terminal form is stored in what is called a batch. Now although you cannot physically see or pick up this batch, it is conceptually similar to a file which is so labelled and stored that you can get it when you need to put something new into it or make changes to things already in it. You can give a batch a name for identification, and that name will be how you refer to it from then on. This name can be any two-character set, and as each user will be using his own batch, it should be something easy to remember such as your initials (unless someone else is already using that set).

In using your terminal you will normally begin a new batch or get your old one from the batch library, at which point the batch will be copied into what is called a "work-space". This can be visualized as the top of a table upon which you place your file to work on it. You may spread out the contents so that you can look through them, or make corrections to them. The batch in the workspace is a copy of what is stored in the library where the batch came from. When your work on your batch is ended, the old version in the library is replaced by the new version in the workspace. Thus you do not have to return the current batch to the library unless it has been added to or changed somehow.

The information which is entered into a form on the terminal is called a "transaction", and includes all the information for that entry, for that format. Thus if you

complete the evaluation form for one student, then that information becomes a transaction. Your batch can store up to 299 of these transactions at any one time, and they may be from any format. Thus you may enter thirty transactions from the Name File format, five from the Transfers format, and sixty from the Module Evaluation formats, and your batch would then contain ninety-five transactions. When you release your batch for processing by the system, all the transactions are removed from the batch and added to an internal, and much larger, library. From there they can be used later in longitudinal reports. At that point you would begin your batch again, adding transactions from a new period until you wished them processed.

The terminal, of course, cannot understand what you want to do unless you use a set of commands which it can understand. Such a set is listed on the following page, and by using these commands you should be able to accomplish any task in the system. Thus you can GET a batch or BEGIN a batch, and END, HOLD, or RELEASE a batch for processing. Having gotten a batch, it is then in the current workspace, and can be altered by adding NEW transactions, UPDATing old ones, or REMOVing old ones. If you wish to look at information which has already been entered, you can LIST transactions, FIND, or LOCATE them, or perform other functions as listed in the commands. If you need clarification at any time as to how to use the system, you can use the HELP command for information on FORMATS, FORMAT01, FORMAT02,

TERMINAL COMMANDS

COMMAND	OP	FUNCTION (EXAMPLES IN PARENTHESES)
BACK	XXX	GO BACK "XXX" TRANSACTIONS AND DISPLAY (1-299).
BEGIN	XX	NAME AND ACTIVATE A NEW BATCH (01, AB, 5T, ETC.).
BYE		TERMINATE DATA ENTRY SESSION.
CLEAR		DELETE ACTIVE (CURRENT) BATCH FROM THE WORKSPACE.
DISPLAY		DISPLAY ACTIVE BATCH CODE, CONNECT TIME, USERID, ETC.
END		STORE THE ACTIVE BATCH IN THE LIBRARY.
FIND	XXX	DISPLAY TRANSACTION WITH SEQUENCE NUMBER "XXX" (1-299).
FIRST		DISPLAY FIRST TRANSACTION IN THE ACTIVE BATCH.
FIX		DISPLAY BATCH TICKET OF ACTIVE BATCH FOR CORRECTION.
FORM	XX	DISPLAY FORMAT "XX" FOR DATA ENTRY (05, 21, ETC.).
GET	XX	GET A COPY OF THE BATCH "XX" FOR NEW ENTRIES, UPDATES.
HELP		LISTING OF DOCUMENTATION THROUGH THE SCREEN (GET, LIST).
HOLD	XX	DO NOT PROCESS BATCH "XX" IN THE NEXT RUN (01, SB).
LAST		DISPLAY THE LAST TRANSACTION IN THE ACTIVE BATCH.
LBACK		DISPLAY PREVIOUS TRANSACTION MATCHING LOCATE CRITERIA.
LFIRST		DISPLAY FIRST TRANSACTION MATCHING LOCATE CRITERIA.
LIBRARY		DISPLAY BATCHES IN THE LIBRARY FOR ACTIVE PRODUCT.
LIBALL		DISPLAY BATCHES IN THE LIBRARY FOR ALL PRODUCTS.
LIST		DISPLAY CONSECUTIVE TRANSACTIONS THROUGH THEIR FORMATS.
LLAST		DISPLAY LAST TRANSACTION MATCHING LOCATE CRITERIA.
LNEXT		DISPLAY NEXT TRANSACTION MATCHING LOCATE CRITERIA.
LOCATE		FIND AND DISPLAY TRANSACTIONS MATCHING SPECIFIED CRITERIA.
NEW		ADD A NEW TRANSACTION TO THE ACTIVE BATCH.
NEXT		DISPLAY THE NEXT TRANSACTION.
NEXT	XXX	GO FORWARD "XXX" TRANSACTIONS AND DISPLAY (1-299).
NEXT	UPD	DISPLAY NEXT TRANSACTION AND PREPARE TO UPDATE IT.
PRODUCT	X/X	SELECT PRODUCT FOR DATA ENTRY (G/L, A/P, PTP).
RELEASE	XX	ALLOW HELD BATCH "XX" TO BE PROCESSED IN NEXT RUN.
REMOVE		DELETE TRANSACTION ON SCREEN FROM THE BATCH.
RESTORE		RE-DISPLAY CURRENT TRANSACTION.
RESTORE	ALL	RE-DISPLAY CURRENT TRANSACTION AND ITS FORMAT.
RUN		REQUEST OVERNIGHT PROCESSING.
RUNCON		REQUEST OVERNIGHT PROCESSING FOR A CONSOLIDATED COMPANY.
SIGNON		TERMINATE SESSION AND START A NEW ONE WITHOUT REDIALING.
STOP		CANCEL PROCESSING REQUEST.
STOPCON		CANCEL PROCESSING REQUEST FOR A CONSOLIDATED COMPANY.
TAB		SET TAB STOPS FOR AUTOMATIC CURSOR AND FIELD POSITIONING.
TIME		DISPLAY CURRENT TIME AND DATE.
UPDATE		REPLACE CURRENT TRANSACTION WITH MODIFIED TRANSACTION.
UPDATE	NEXT	DO CURRENT UPDATE AND THEN DISPLAY THE NEXT TRANSACTION.

NOTE: THE FIRST THREE CHARACTERS OF A COMMAND WILL USUALLY SUFFICE.

FORMATO3, FORMATO4, or any of the commands listed. The set of commands are designed to be easy to learn and remember, and usually a little practice goes a long way toward realizing their utility.

THE FORMATS

For the ISSOE application, there are five formats provided for your use. The one which will be used most often is the Module Evaluation Form, but you may want to take advantage of the others from time to time. The complete list is as follows:

FORMAT 01: CRITERIA FILE

FORMAT 02: NAME FILE

FORMAT 03: TRANSFERS

FORMAT 04: MODULE EVALUATION

FORMAT 06: RECOMMENDATIONS

Each format is designed to be as easy to use as possible, and there are a number of ways to make the use of forms even easier. As some of the forms have more areas to be filled than you might need (comments on the Module Evaluation form, for instance), the TAB command can be used to blank out some areas of the form. When using the form, then, unwanted areas are skipped over, saving time and aggravation. If some of the information at the start of the form is repeated (as in the case of Date, Class, Course, Unit, and Module in the Evaluation form) for a number of students, you can use the TAB command to start each entry at the Student Identification entry. To use the TAB command, refer to the instructions

provided on the terminal by use of the HELP command.

There is a format called the Batch Ticket which must be filled out whenever you BEGIN a new batch. The information entered into the batch ticket helps to identify the batch, but for the ISSOE application there are things to fill out which will not make much sense. Don't worry about this at the moment, but use the following guide in filling the ticket out:

AGENCY CODE: the name of your school or center, brief.
UNIT NAME: the name of your department or class.
UNIT IDENTIFICATION: any sort of ID you wish.
DATE: the current date, month/day/year.
PERIOD: "3".
UNIT BUDGET: "1".
UNIT HEAD: your name, which will appear on reports.
PHONE NUMBER: optional.
TYPE OF UNIT: optional.

In filling out a format, there are a couple of things to keep in mind. First, the system is set up so that as you are typing in things on the terminal it is sort of just sitting there. When you have completed a format and wish to send that information, the cursor should be positioned somewhere beyond the last entry, and the CTRL/SHIFT/SEND sequence used. The cursor will then go down through the format, sending what you have entered to the computer over the phone. Without the use of the CTRL/SHIFT/SEND the system is not aware that you are doing anything, which gives you the opportunity of reviewing the entered information before it

is sent.

Secondly, if you wish to move about in the format, and do not like to space your way along, you can go directly to the next area to be filled in (a "field") by using the TAB key. Further, there are four keys with arrows which indicate directions in which you can move the cursor directly. Thus the ↑ arrow moves the cursor directly up to the line above. Moving the cursor directly can save some aggravation, especially as it does not erase things you have already typed in. If you use the space bar, on the other hand, the cursor will leave spaces in each position, erasing what you had there. The HOME key is also handy for going directly to the COMMAND area, and the CLR key erases everything in the format which you have entered, all at once.

Another thing to remember is that such a system is not foolproof, and every once in a while a format will suddenly start refusing to cooperate with you. In this event try using the command RESTORE with the op ALL. This will erase the entire screen, put the format back up, and put the entries, if they were entered, back in the format. This tends to clean things up, and will often solve your problem.

FORMAT 01: CRITERIA FILE:

This format will be used, if desired, to enter the information which is necessary to process the module evaluations. If it is not used, all processing will be done using the Central Criteria File as established by the State Education Department. If you enter scoring information, it will be kept in a separate file. Given a module to process, the system first looks in the Central File to see if that module is there. If it is not, it then checks to see if there is a regional file, and looks for the module information in that. If the module is not found there, then the reports cannot be produced, and the information is passed directly into the central library to be stored for future use.

This is not the easiest format to understand, so the explanation will be divided into two sections. There is, first, the situation where all the information for a module is defined within that module. Appendix C provides an example of such a situation. It can be seen that each topic is sequential (01,02,03) within its module, and each module is sequential within its unit, and so forth. The Criteria File format can be used to enter the identification numbers and descriptions of the course, unit, module, and topic elements. The format is presented on the following page for reference. If you want to put information for a given level, such as the course level, into the system, then the identification number for that level is entered, and the number for the levels below are left blank. Thus for course you would

COMMAND-- --OP-- --FORM 01--CRITERIA FILE

COURSE ----------: :----------
UNIT ----------: :----------
MODULE ----------: :----------
TOPIC ----------: :----------
DESCRIPTION ----: :----
----: :----

CONTROL KEYS: NUMBER ------: :----------
CRITERIA ----: :----------

01-:	:02-:	:03-:	:04-:	:
05-:	:06-:	:07-:	:08-:	:
09-:	:10-:	:11-:	:12-:	:
13-:	:14-:	:15-:	:16-:	:

enter only the course number, its description, and the Number Control Key. Now in all instances the Number Control Key indicates the number of elements which you are going to enter in the level just below the current one. Thus for this course there are two units, and a "2" would be entered there. The Criteria Control Key can be any number less than or equal to the Number Control Key, and indicates the number of elements in the next level which must be mastered for the present level to be considered mastered. Normally this will be left blank, and will be set automatically to the value of the Number Control Key (100% mastery).

The second entry for this course, after the course level entry, would be the unit 1 entry. The course number is again filled in, and the unit identification number is filled in, but the others are left blank. The unit description is entered, and the Number Control Key indicates the number of modules included within that unit, in this case 3. The process continues down to module and topic levels. At the topic level the Number Control Key indicates the number of items which are to be used to evaluate mastery of the topic, and the Criteria Control Key will indicate, if used, the number needed for topic mastery or, if not used, will be set to the Number Control Key. Now that you are thoroughly confused, we will go on to the second type of usage for this form.

If there are two or more modules which use the same topics for evaluation, you might think you would have to

enter the same information several times, once for each module. There is a way to cross-reference levels so that you only have to enter the information once, and "point to" it in subsequent references. Using the example in Appendix C, then if the following were true:

Unit 1, Module 1, Topic 1 = Unit 2, Module 1, Topic 2
Unit 1, Module 3 = Unit 2, Module 2

then the example in Appendix D could be used instead. In that example, Unit 1 Module 1 contains the cross-reference 020102, which points to Unit 2 Module 1 Topic 2. Unit 2 contains the cross-reference 010300 which points to Unit 1 Module 3. Such cross-referencing may seem overly complicated, but with some practice it can become a quick and easy way to create new course descriptions out of a number of current ones.

FORMAT 02: NAME FILE:

Currently this form is being used only to provide the names used in the various reports. Address and parents name do not have to be used. The area used for comments will be printed on the student reports, and can contain anything you might wish to say there. The form can also be used to enter the name of the class, and the name of the class teacher. To use it for teacher names, only the teacher identification (the first field) is filled, along with the last and first names. For class name or description enter both the teacher ID and the class ID, and then both last and first name areas together. If this form is not used for these names then the information will be taken from the batch ticket associated with your batch.

The Name File format is presented on the following page. In creating the class roster, this need be done only once. Thereafter the information will be stored in the larger library of the processing system. If you wish to remove a student from the roster, use the Transfer format (03). If you wish to make a change to a name already entered, simply fill out another Name File format for the same teacher/ class/ and student ID. In other words if BONETTI's name were mispelled BONETI, and you wished to change it, a new entry will replace the old. Changing the student's ID, however, requires a transfer.

COMMAND-- --OP-- --FORM 02--NAME FILE

TEACHER ----------: :----------

CLASS ----------: :----------

STUDENT ----------: :----------

LAST NAME ----------: :---

FIRST NAME ----------: :--------

STREET ADDRESS ------: :--

CITY/TOWN ----------: :--

STATE ----------: :--------

ZIP ----------: :----------

PARENT NAME ---------: :-------

COMMENTS -------: :

COMMENTS -------: :

FORMAT 03: TRANSFERS:

If the identification number of a teacher, class, or student needs to be changed, this form should be used. It should be fairly clear how the form is used. The comments are used for any special remarks regarding the transfer, and will appear on the transfer report.

Where either an old or a new identification number is unknown, or is out of the system, place 9's in the appropriate fields. Thus a student transferring to an unknown class would receive a class ID 99999.

Use of this form only changes identification numbers. Actual movement of student records requires Report 03 to be run, using the RUN request.

```
COMMAND--          --OP--          --FORM 03--TRANSFERS

TEACHER ----------:      :-------:      :------------
CLASS ------------:      :-------:      :------------
STUDENT ----------:       :------:       :-----------
NAME OF PERSON REQUESTING TRANSFER :                  :
COMMENTS -:                                           :
COMMENTS -:                                           :
```

FORMAT 04: MODULE EVALUATION:

On the following page is an example of this form. It is to be used for the module evaluation of each individual student. Date, class, course, unit, module, and student ID must all be filled in. The student ID may be of your own construction, or may be a school assigned number. The student name does not have to be entered, in which case the name in the central file (via form 02) will be used. If there is yet no name there, an identification label will be created from the identification number provided on this form.

The comment areas are for any appropriate comments you may wish to make for this student for this evaluation. They are not kept past the time those reports are generated.

The areas for entering the item evaluations are grouped in clusters of four. If an evaluation has ten items, only the first three fields need be used, and the others can be omitted by using the TAB command. You should fill in every item evaluation, even if you need to use "U" for unknown or untested. A "U" will not be counted in the report, but will be included in the "OMIT" column of the Group Response Matrix.

COMMAND-- --OP-- --FORM 04--MODULE EVALUATION

DATE ----------: :---(MMDDYY)----

CLASS ----------: :----------

COURSE ----------: :----------

UNIT ----------: :----------

MODULE ----------: :----------

STUDENT IDENTIFICATION -------: :----------

STUDENT NAME (OPTIONAL) : :--

****ITEM EVALUATIONS: ENTER "Y", "N", OR "U" IN GROUPS OF 4

01-04:	05-08:	09-12:	13-16:	
17-20:	21-24:	25-28:	29-32:	
33-36:	37-40:	41-44:	45-48:	
49-52:	53-56:	57-60:	61-64:	

COMMENT --: :---

COMMENT --: :---

REPORTS

One set of reports are currently produced whenever a RUN is requested. They are designed after the ISSOE reports which you may have already been using, and include the End of Module Evaluation, the Group Response Matrix, the Individual Response Matrix, and the Student Reports (see Appendix B). Other reports can be arranged for on a regional basis, whether they be periodic reports or longitudinal reports. The report period is apt to be weekly, although any period may be used.

END OF MODULE EVALUATION:

This report is designed to show, on a student-by-student basis, which topics have been achieved according to the established criteria levels. If a topic, for instance, contains three items, a student may be said to understand that topic if he gets two of the three items correct, or the criterion could be set at one or three. Under the report header, which contains the school, teacher, class, and module identifying information, each topic is identified across the top by its sequence number (01-16) within the module being evaluated. Under each sequence number is noted, within parentheses, the number of items which are contained in that topic. Below this, each line represents a separate student and may be labelled with the student's name or number. For

each student, under each topic, is a signed digit representing the number of items within that topic which he has mastered, and whether he has mastered (+) or not mastered (-) that topic according to the established criteria. At the right-hand side of the report are two columns representing, first, the number of items mastered out of the total (indicated at the top within parentheses), and the number of topics mastered, out of the total (also indicated at the top within parentheses).

At the bottom of this report are the totals for the number mastering each topic. This provides a quick means of determining whether an entire topic needs to be gone over again for the entire class, or whether individual students need attention.

GROUP RESPONSE MATRIX:

This report is aimed at providing somewhat more summary detail than the end of module evaluation. For each topic, in sequence order, the report gives the items associated with each topic, the correct answer, the number of correct answers given, the number of incorrect answers, the total answers, and the items not answered (omits). In the case of the TSSOE evaluation system to date, there are really no "right" or "wrong" answers, but rather the response "Y" means that the student has mastered that item. Thus for this report, the "ANS" column will always be "Y", indicating that the goal is to master the item.

INDIVIDUAL RESPONSE MATRIX:

This report is similar to the end of module evaluation, but indicates the individual item responses or, in the case of ISSOE, whether (Yes or No) the item was mastered. If the student mastered the topic, then nothing is indicated, but if he did not then his item evaluations are indicated.

STUDENT REPORTS:

Each student is given a report indicating which module he is being evaluated on, which topics are in that module, whether he mastered each topic, how many items in each topic he mastered, and how many he needed in order to master the topic.

APPENDIX A

CONVENTIONS:

For ease of communication, two conventions will be assumed herein. The first is the use of the key on the terminal marked "RETURN". When you need to use that single key, the instructions will ask you to type a RETURN. Please do not confuse this with typing in the six characters of the word "RETURN".

The second convention applies to instances in which you will need to depress one key while typing another. This situation is a special case, and is used when the accidental striking of an important key is to be avoided, or a special command is to be issued to the system. In these situations there is one key, the "CTRL" key, which is depressed while typing the other key. The use of this convention will be indicated by the use of the phrase "CTRL/H", which indicates that the "H" key is to be typed while depressing the "CTRL" key. There is also one instance in which you will hold both the "CTRL" and the "SHIFT" keys, together on the left of the keyboard, down while using the "SEND" key. This will be indicated as "CTRL/SHIFT/SEND".

PREPARATION OF THE EQUIPMENT

TERMINAL SETTINGS:

The power switch is located on the back of the unit.

Set the following switches to the indicated positions:

RATE: L

DUPLEX: H for the initial connection procedure.

F for the sign-on procedure and use thereafter. — Not Ne

COUPLER SETTINGS:

The power switch is a small switch located on one end of the unit, and is labelled "ON" and "OFF".

Set the other labelled switch to "FULL".

There are two red lights. One indicates that the power is on, while the other indicates that the coupler has made its connection with the computer after the phone is connected.

THE TELEPHONE:

This can be any standard telephone unit. If it is an extension, or goes through a switchboard, the user should be aware of the possibility of an interruption caused by someone else attempting to use the same line. Thus a separate phone is recommended, but is not really necessary.

The following numbers are currently available for usage of the system:

New York (212) 736-7800

New York (212) 750-9445

Syracuse (315) 476-5571

Buffalo (716) 856-1400

THE INITIAL CONNECTION:

Make sure that both units are on, and the terminal DUPLEX switch is in the "H" position. Dial one of the phone numbers listed. You should soon hear a distinct "beep" from the other end, at which point you should place the receiver into the coupler, with the cord end at the indicated position. The second red light on the coupler should then come on, indicating that a connection has been made to the central system, and you are ready to proceed.

FOR THE (736-7800) NEW YORK NUMBER ONLY:

Type "CTRL/P", followed by "DD", and a RETURN. Go on to the Sign-On procedure.

FOR ALL OTHER NUMBERS:

When the initial connection is made, the terminal will display some meaningless characters. Don't worry about them. Type an "A", and the terminal will then ask you to "log on". Type a "C", and then a "CTRL/H", followed by "O;TYM" and a RETURN. A ";" will appear on the next line. When it does, type a RETURN, then "DD", and another RETURN. Go on to the Sign-On procedure.

THE SIGN-ON PROCEDURE:

Set the terminal DUPLEX switch to the "F" position. — NOT NEC.

The system should have by now asked you to identify the type of terminal you are using. Respond by typing an "A", followed by a "CTRL/SHIFT/SEND". ← RETURN, instead The system should then ask you to enter your account number and your password. They are entered,

respectively, as "account,password", followed by a "CTRL/SHIFT/SEND". Your account code is assigned to you (or your group), and can only be used by you. You are responsible for remembering your password, which may be changed if a need arises at any time. When you change the password, however, make certain that everyone else is aware of the new password.

SYSTEM USAGE:

The terminal should now have notified you that you were signed on to the system, and you can proceed with normal usage, as discussed in this manual.

APPENDIX B

SCHOOL 311: DUTCHESS COUNTY BOCES OE CENTER TEACHER 46723: WALKER, D.

CLASS 10097: BUSINESS SKILLS

COURSE 140303: OFFICE TRAINING

UNIT 01: MACHINE SKILLS

MODULE 01: ADDING MACHINES

STUDENT	TOPICS MASTERED: YES(+) OR NO(-) AND #ITEMS								ITEM RATIO	TOPIC RATIO
	01	02	03	04	05	06	07	08		
	(3)	(3)	(3)	(3)	(4)	(3)	(5)	(2)	(26)	(8)
BONETTI, D	+3	+2	+3	+3	-2	-1	+3	+2	19	6
BOYL, M	-1	+3	+3	+2	-1	-2	+4	+2	18	5
FINNERTY, T	+3	+3	+3	+3	+4	+3	+5	+2	26	8
HEIDENREICH, S	-1	-1	-2	-1	-3	-2	+4	-1	15	1
LACIJAN, B	+2	+3	+3	+2	-0	-1	-1	-0	12	4
TOTAL MASTERED	3	4	4	4	1	1	4	3		
OUT OF 5										

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SCHOOL 311: DUTCHESS COUNTY BOCES OE CENTER · TEACHER 46723: WALKER, D.

CLASS 10097: BUSINESS SKILLS

COURSE 140303: OFFICE TRAINING

UNIT 01: MACHINE SKILLS

MODULE 01: ADDING MACHINES

SEQ	TOPIC DESCRIPTIONS	ITEM	ANS	MASTERED YES	MASTERED NO	TOT	ON
01	LABL PARTS 10 KEY MACH 80% ACC REPL PAPR&RIB 10 MIN 100 ACC	01	Y	5	0	5	
		02	Y	3	2	5	
		03	Y	2	3	5	
02	10 KEY MACH ADD 14 NOS 2-6 DIG 3 MIN TOUCH METH 100% ACC	04	Y	3	2	5	
		05	Y	5	0	5	
		06	Y	4	1	5	
03	TEN KEY SUBTRCT 5 SETS 2-6 DIG NOS 3 MIN TOUCH METH 100% ACC	07	Y	5	0	5	
		08	Y	4	1	5	
		09	Y	5	0	5	
04	10 KEY MULT 10 SETS 2-6 DIG NO 3 MIN TOUCH METH 100% ACC	10	Y	4	1	5	
		11	Y	5	0	5	
		12	Y	2	3	5	
05	FULL KEY LABL PARTS 80% ACC REPL PAPER&RIB 10 MIN 100%	13	Y	4	1	5	
		14	Y	2	3	5	
		15	Y	3	2	5	
		16	Y	1	4	5	
06	FULL KEY ADD 10 NOS 2-6 DIG 3 MIN TOUCH METH 100% ACC	17	Y	1	4	5	
		18	Y	3	2	5	
		19	Y	5	0	5	
07	FULL KEY SUB 5 SETS 2-6 DIG NO 3 MIN TOUCH METH 100% ACC	20	Y	4	1	5	
		21	Y	4	1	5	
		22	Y	4	1	5	
		23	Y	3	2	5	
		24	Y	2	3	5	
08	FULL KEY MULT 2 SETS 6-9 DIG NO 1 MIN TOUCH METH 100% ACC	25	Y	3	2	5	
		26	Y	4	1	5	
	PAGE TOTALS	26		90	40	130	

4/14/76 INDIVIDUAL RESPONSE MATRIX

SCHOOL 311: DUTCHESS COUNTY BOCES OE CENTER TEACHER 46723: WALKER, D.

CLASS 10097: BUSINESS SKILLS

COURSE 140303: OFFICE TRAINING

UNIT 01: MACHINE SKILLS

MODULE 01: ADDING MACHINES

TOPICS NOT MASTERED: (ITEMS ARE BLANK IF MASTERED)

STUDENTS	ITEMS	000 000 000 111 1111 111 22222 22 123 456 789 012 3456 789 01234 56
BONETTI, D		YYNN NNY
BOYL, M		YNN YYNN NNY
FINNERTY, T		
HEIDENREICH, S		YNN NYN YNY NYN NYYY NYY NY
LACIJAN, B		NNNN NNY NNYNN NN

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4/14/76 STUDENT REPORT FOR BONETTI, D

SCHOOL 311: DUTCHESS COUNTY BOCES OE CENTER
TEACHER 46723: WALKER, D.

CLASS 10097: BUSINESS SKILLS
COURSE 140303: OFFICE TRAINING

UNIT 01: MACHINE SKILLS
MODULE 01: ADDING MACHINES

TOPICS COVERED:	MASTERED	ITEMS CORRECT	ITEMS NEEDED
01:LABL PARTS 10 KEY MACH 80% ACC REPL PAPR&RIB 10 MIN 100 ACC	YES	3	2
02:10 KEY MACH ADD 14 NOS 2-6 DIG 3 MIN TOUCH METH 100% ACC	YES	2	2
03:TEN KEY SUBTRCT 5 SETS 2-6 DIG NOS 3 MIN TOUCH METH 100% ACC	YES	3	3
04:10 KEY MULT 10 SETS 2-6 DIG NO 3 MIN TOUCH METH 100% ACC	YES	3	2
05:FULL KEY LABL PARTS 80% ACC REPL PAPER&RIB 10 MIN 100%	NO	2	4
06:FULL KEY ADD 10 NOS 2-6 DIG 3 MIN TOUCH METH 100% ACC	NO	1	3
07:FULL KEY SUB 5 SETS 2-6 DIG NO 3 MIN TOUCH METH 100% ACC	YES	3	3
08: FULL KEY MULT 2 SETS 6-9 DIG NO 1 MIN TOUCH METH 100% ACC	YES	2	2

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APPENDIX C

COURSE DESCRIPTIONS, NO CROSS-REFERENCES

IDENTIFICATIONS/ DESCRIPTION /KEYS /REFERENCES

170302/00/00/00/...Course...../02/02/010000/020000
170302/01/00/00/.....Unit 1...../03/03/010100/010200/010300
170302/01/01/00/.....Module 1../02/02/010101/010102
170302/01/01/01/.....Topic 1/03/02/010203
170302/01/01/02/.....Topic 2/04/03/04050607
170302/01/02/00/.....Module 2../01/01/010201
170302/01/02/01/.....Topic 1/02/02/0102
170302/01/03/00/.....Module 3../02/02/010301/010302
170302/01/03/01/.....Topic 1/05/03/0102030405
170302/01/03/02/.....Topic 2/02/02/0607
170302/02/00/00/.....Unit 2...../02/02/020100/020200
170302/02/01/00/.....Module 1../02/02/020101/020102
170302/02/01/01/.....Topic 1/01/01/01
170302/02/01/02/.....Topic 2/02/02/0203
170302/02/02/00/.....Module 2../03/03/020201/020202/020203
170302/02/02/01/.....Topic 1/08/06/0102030405060708
170302/02/02/02/.....Topic 2/04/03/09101112
170302/02/02/03/.....Topic 3/02/01/1314

APPENDIX D

COURSE DESCRIPTIONS WITH CROSS-REFERENCES

IDENTIFICATIONS/	DESCRIPTION	/KEYS /REFERENCES
170302/00/00/00/...	Course.....	/02/02/010000/020000
170302/01/00/00/.....	Unit 1.....	/03/03/010100/010200/010300
170302/01/01/00/.....	Module 1..	/02/02/020102/010102
170302/01/01/02/.....	Topic 2	/04/03/01040506
170302/01/02/00/.....	Module 2..	/01/01/010201
170302/01/02/01/.....	Topic 1	/02/02/0102
170302/01/03/00/.....	Module 3..	/02/02/010301/010302
170302/01/03/01/.....	Topic 1	/05/03/0102030405
170302/01/03/02/.....	Topic 2	/02/02/0607
170302/02/00/00/.....	Unit 2.....	/02/02/020100/010300
170302/02/01/00/.....	Module 1..	/02/02/020101/020102
170302/02/01/01/.....	Topic 1	/01/01/01
170302/02/01/02/.....	Topic 2	/02/02/0203

The Shenendehowa High School chapter is serving as host for this workshop. All of their members are wearing "HOST" ribbons. If you have any questions or need any assistance, please seek out one of their members.

SCHEDULE OF EVENTS

Friday, October 22

12:00 noon-1:30 p.m.	Registration (Under direction of Ms. Nancy Washer and the Hancock Chapter)	Main Lobby
1:30-2:00 p.m.	Opening Session (April Cuva presiding)	Auditorium
2:15-3:15 p.m.	Duties of an officer President Vice-President Secretary/Treasurer Reporter/Historian	 Auditorium Room A Room B Room C
3:20-4:20 p.m.	Your National Office... Services and Assistance (Under direction of Edward Burakowski, Associate Director, Washington, DC)	Room A
	Membership Development (Under direction of Dr. George Goldstein and Shenendehowa Chapter)	Room B
3:20-5:25 p.m.	Using Parliamentary Procedures in FBLA (Under direction of Mr. Vincent Marolla and Roosevelt H.S. Chapter at Yonkers)	Room C
4:25-5:25 p.m.	Contest Changes and Updates	Room A

4:25-5:25 p.m.	Fund Raising Projects (Under direction of Greece-Arcadia, Greece-Athena and Greece-Olympia Chapters and their Advisors)	Room B
6:00-6:30 p.m.	Coketail Party	Auditorium
6:45-7:45 p.m.	Dinner	Auditorium
8:15-9:15 p.m.	Chapter of the Year Contest	Room A
	Effective Community Projects (Under direction of Ms. Sally Cowan and Marion Chapter)	Room B
	State Leadership Conference 1977 (Under direction of State Officers)	Room C
9:30-12:30	Rock Band (Lolo Tonale)	Auditorium

Saturday, October 23

9:00-10:00 a.m.	State Leadership Conference 1977	Room A
	Effective Community Projects	Room B
	Membership Development	Room C
9:00-11:10 a.m.	Advisors Workshop	Room A
10:10-11:10 a.m.	Fund Raising Projects	Room B
	State Leadership Conference 1977	Room C
11:15-12:00 noon	Closing Session (April Cuva, presiding)	Auditorium

CALENDAR OF EVENTS
1976-77

Nov 5-6	Nat. Eastern Regional Conference	Howard Johnson Windsor Locks, CT
Dec 1	Payment of State and Nat. Dues to be eligible for Gold Seal Awards	
Dec 31	Roster (dues) Filing Deadlines Filing of Chapter Program of Activities	
1977		
Jan 30-31	State Officers and Trustees Meeting	Albany, NY
March 1	Deadline-State Officer Candidate Applications	
March	District Meetings (District eliminations for SLC)	District Locations
April 1	Deadline-Largest Chapter Membership	
April 6	SLC Pre-registration Deadline	
Apr 27-29	State Leadership Conference	Grossinger Hotel Liberty, NY
May 6-8	BTA Convention	Holiday Inn-Downtown Rochester, NY
May 15	Registration for Charter Flight to National Conference	
July 1-4	National Leadership Conference	Hilton Hotel Denver, CO
July 5-11	Combined Leadership Workshop (DECNY, FBLA, FFA, FHA, VICA)	Camp Oswegatchie Croghan, NY

NEW YORK STATE ASSOCIATION
FUTURE BUSINESS LEADERS OF AMERICA
1976-77

STATE OFFICERS

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	Vanessa Brucker, Herkimer Co. BOCES
	Davidlee Barker, Fowler
	Charlene Ann Szydlowski, Greece Arcadia

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APPENDIX D

APPENDIX D - QUESTIONNAIRE

1. Is your understanding of the workshop objectives before coming to Cornell the same as the objectives explained at the workshop? Yes____ No____

2. Were the objectives of the workshop met? Yes____ No____

3. Do you feel that the workshop was the major tool in developing the uniform format for modular curriculum? Yes____ No____

4. Did you fully understand your role in the workshop? Yes____ No____

5. Was there enough time in the workshop to develop an agreed-upon uniform format for modular curriculum? Yes____ No____

6. Do you think a similar cross-section of experts should be used in such a workshop? Yes____ No____

7. Do you think such a workshop can be used for other occupations? Yes____ No____

8. Do you think that a similar workshop should be conducted to evaluate and revise a uniform format? Yes____ No____

9. Did you have enough opportunity to express your ideas? Yes____ No____

10. Were your colleagues willing to discuss your ideas? Yes____ No____

11. Do you feel that it was a group effort? Yes____ No____

12. Through the process of modular curriculum development, do you feel that some ideas were "forced" by one or more of the participants. Yes____ No____

13. Were your ideas and professional expertise expressed in the workshop? Yes____ No____

14. Have you a sense of accomplishment? Yes____ No____

15. Was the workshop well organized? Yes____ No____ If not, explain:_____

16. Was there good leadership displayed in the workshop? Yes____ No____

. Were the accomodations and the physical setting of the workshop acceptable to you?

Yes____ No____ If not, explain or suggest changes_____

. If you have the opportunity, will you participate again in a similar workshop?

Yes____ No____

. What did you like or dislike most about the workshop?

Explain_____

. What would you like to be changed or added?

Explain_____

. Would you recommend modifications for the workshop?

Yes____ No____ Explain_____

. Would you recommend that others attend a similar workshop?

Yes____ No____

3. Please add additional comments, if any.

_____

PRE-ASSESSMENT QUESTIONNAIRE Ed. 533

Please answer the following:

	Yes	No	Don't Know
1. Do you feel you understand the course objectives?	___	___	___
2. Do you understand your role in the course?	___	___	___
3. Do you believe that ISSOE will help assist you to improve your instructional approach?	___	___	___
4. Do you understand what is meant by a uniform format for modularized curriculum?	___	___	___
5. Do you feel that you can utilize a uniform format for curriculum?	___	___	___
6. As a group, can we grow to develop a modularized curriculum?	___	___	___
7. Are you ready to share or accept criticism from your colleagues?	___	___	___
8. Are you willing to listen to your colleagues' points of view?	___	___	___
9. Would you consider Ed.533 an inservice training in curriculum development for teachers?	___	___	___

Please answer briefly the following questions:

1. What is meant by a uniform format?_____

2. What is the purpose of a uniform format?_____

3. Who should develop curriculum?_____

4. What do you expect to gain from Ed.533? How will it affect you personally and professionally?_____

5. What would constitute a useable curriculum in occupational education?

ISSOE - Ed. 533
POST-ASSESSMENT QUESTIONNAIRE

	YES	NO	DON'T KNOW
1. Upon completion of Ed. 533, do you feel you have gained a better understanding of the course objectives?	____	____	____
2. Were the objectives of Ed. 533 met?	____	____	____
3. Has Ed. 533 improved your understanding regarding the concept of a uniform format for modularized curriculum?	____	____	____
4. Upon completion of Ed. 533, do you feel that ISSOE has assisted you in improving your instructional approach?	____	____	____
5. Did you fully understand your role in the course?	____	____	____
6. Do you feel that you can utilize a uniform format for your curriculum?	____	____	____
7. Do you feel that you have become an integral part of the group process while developing a modularized curriculum?	____	____	____
8. In writing the modules, did you exchange criticism with your colleagues?	____	____	____
9. Did you have enough opportunity to express your ideas?	____	____	____
10. Were your colleagues willing to discuss your ideas?	____	____	____
11. Were your ideas and professional expertise expressed in the process of developing new modules?	____	____	____
12. Through the process of modular curriculum development, do you feel that some ideas were "forced" by one or more of the participants?	____	____	____
13. On the whole, do you feel that construction of curricular modules utilizing a uniform format was a group effort?	____	____	____
14. Would you consider Ed. 533 as inservice training in curriculum development for teachers?	____	____	____
15. Do you think such a workshop (course) can be used for a variety of occupational teachers?	____	____	____
16. Do you have a sense of accomplishment regarding writing modules?	____	____	____

	YES	NO	DON'T KNOW
17. Did you gain from Ed. 533 what you have expected to gain (professionally & personally)?	____	____	____
18. Was Ed. 533 well organized?	____	____	____
19. Was good leadership by course teachers displayed in the course?	____	____	____
20. Would you recommend changes or modifications regarding organization, presentations, subject matter, etc.?	____	____	____

Explain: _____

_____

_____

21. Were the accomodations and physical setting acceptable to you? ____ ____ ____

If not, explain or suggest changes: _____

_____

_____

22. Given an opportunity, will you participate again in a similar course? ____ ____ ____

23. What did you like or dislike most about the course?

LIKE	DISLIKE
_____	_____
_____	_____
_____	_____
_____	_____

24. Would you recommend that others attend a similar course? ____ ____ ____

25. Please add additional comments, if any: _____

_____

_____

_____

ISSOE
CHECKLIST FOR TEACHERS

A. Teacher's Management Tool

1 A) Rate the ISSOE approach regarding the following (scale 1-5, 1=least, 5=most)
B) Please compare the following to previous experience
C) Comment

	Rate A	Rate B	Comment
Your overall planning procedures	____	____	_____
Utilization of teacher's time	____	____	_____
Securing and organizing supply and material	____	____	_____
Self organization and instructional preparation	____	____	_____
Organization of shop or classroom	____	____	_____
Student learning activities	____	____	_____
Organization of students	____	____	_____
Individual instruction	____	____	_____
Recordkeeping	____	____	_____
Managing customer service	____	____	_____
Utilizing services of curriculum coordinators	____	____	_____
Evaluative instrument for student achievement	____	____	_____
A promotional tool for public information	____	____	_____
Other	____	____	_____

2. In order to maximize the effectiveness of the modularized curriculum instruction, what recommendations would you have regarding the following:

	Auto Mechanics	
	Open System	Traditional System
Class size:		
a. optional number of students	_____	_____
b. maximum number of students	_____	_____

Physical setting:
a. open system ____
b. traditional system ____
c. Other ____ explain _____

Mode of operation:
a. work stations ____
b. live work only ____
c. combination of the two ____

3. What kind of back up support and assistance by the local curriculum coordinators and the administration do you feel is needed in order to implement efficiently the ISSOE approach?

Assist to adjust the modular curriculum package to meet students needs, including special students needs, handicapped students, bilingual students, etc.
Yes____ No_____ Comment:_____

Assist teachers adjust the curriculum package to shop or classroom setting
Yes____ No_____ Comment:_____

Assist teachers with overall program planning
Yes____ No_____ Comment:_____

Assist teachers with planning for needed supply and customer service
Yes____ No_____ Comment:_____

Provide budgetary decisions to meet students need
Yes____ No_____ Comment:_____

Provide administration decisions regarding students
Yes____ No_____ Comment:_____

Identify resources for teachers use
Yes____ No_____ Comment:_____

Assist teachers in choosing mode of teaching
Yes____ No_____ Comment:_____

4. The student reporting system is:

satisfactory _____

satisfactory but time consuming _____

too complicated _____

needs improvements _____

other_____ _____

Please comment(and/or suggest improvements):_____

_____

_____

_____

B. Curriculum

5. Degree of satisfaction with the modules, and comments for improvements:

No. & Module	O.K.	IMPROVEMENT MAJOR	IMPROVEMENT MINOR	COMMENTS:
AUTO MECHANICS				
1. General Safety	___	___	___	_____
2. Job Opportunities & Requirements	___	___	___	_____
3. Tools	___	___	___	_____
4. General Auto Service	___	___	___	_____
5. Brake System	___	___	___	_____
6. Suspension System	___	___	___	_____
7. Cooling System	___	___	___	_____
8. Fuel System	___	___	___	_____
9. Ignition System	___	___	___	_____
10. Exhaust System	___	___	___	_____
11. Lighting Systems	___	___	___	_____
12. Charging and Starting Systems	___	___	___	_____
OFFICE TRAINING				
1. Adding Machines	___	___	___	_____
2. Filing	___	___	___	_____
3. Office Forms	___	___	___	_____
4. Payroll Procedures	___	___	___	_____

6. The evaluation procedure is: (column 4 in the curriculum package)

Satisfactory	_____
Satisfactory with some improvement	_____
Complicated but useable	_____
Not valid	_____
Needs revision	_____
Not needed at all	_____
Other	_____

Please comment: _____

_____

_____

7. In comparison to previous experiences, how would you rate the ISSOE approach as it affects students regarding the following (scale 1-5; 1=least; 5=most)

	ISSOE APPROACH	PREVIOUS APPROACH
Allows students to proceed at their own pace	_____	_____
Permits student recycling	_____	_____
Students cover more material	_____	_____
Students opportunity for specialization	_____	_____
Students understanding	_____	_____
Students motivation	_____	_____
Students achievement	_____	_____
Students independence	_____	_____
Students acceptance of responsibility	_____	_____
Other_____	_____	_____

Please comment: _____

_____

_____

8. Will you continue to use the modules next year? ____Yes ____No ____All ____Part
If part, which one? If No, go to Question 9.

No. & Module	Yes	No	All	Part	Which?
AUTO MECHANICS					
1. General Safety	___	___	___	___	_____
2. Job Opportunities & Requirements	___	___	___	___	_____
3. Tools	___	___	___	___	_____
4. General Auto Service	___	___	___	___	_____
5. Brake System	___	___	___	___	_____
6. Suspension System	___	___	___	___	_____
7. Cooling System	___	___	___	___	_____
8. Fuel System	___	___	___	___	_____
9. Ignition System	___	___	___	___	_____
10. Exhaust System	___	___	___	___	_____
11. Lighting Systems	___	___	___	___	_____
12. Charging and Starting Systems	___	___	___	___	_____
OFFICE TRAINING					
1. Adding Machines	___	___	___	___	_____
2. Filing	___	___	___	___	_____
3. Office Forms	___	___	___	___	_____
4. Payroll Procedures	___	___	___	___	_____

9. Please rate the modules regarding its adaptability to individualized instruction. (Scale 1-5; 1=least; 5=most)

No. & Module	Rate	Comments:
AUTO MECHANICS		
1. General Safety	___	_____
2. Job Opportunities & Requirements	___	_____
3. Tools	___	_____
4. General Auto Service	___	_____
5. Brake System	___	_____
6. Suspension System	___	_____
7. Cooling System	___	_____
8. Fuel System	___	_____
9. Ignition System	___	_____
10. Exhaust System	___	_____
11. Lighting Systems	___	_____
12. Charging and Starting Systems	___	_____
OFFICE TRAINING		
1. Adding Machines	___	_____
2. Filing	___	_____
3. Office Forms	___	_____
4. Payroll Procedures	___	_____

C. Management ISSOE Project

10. Please rate the following agencies on a one to five scale regarding their effective involvement in the project and whether you would like to see their continuous or discontinuous involvement in a similar project in the future: (1=least effective; 5=most effective)

AGENCY	Rate	Continue	Discontinue	Added
SED	____	_____	_____	_____
CIOE	____	_____	_____	_____
RRI	____	_____	_____	_____
LOCAL ADMINISTRATION	____	_____	_____	_____
CURRICULUM COORD.	____	_____	_____	_____
OCC ED DIRECTORS	____	_____	_____	_____
OTHER	____	_____	_____	_____

Please add additional comments regarding the above, if any: _____

_____

_____

11. Comment regarding the local and regional meetings of the ISSOE project:

	OK AS IS	NEED CHANGE	IF NEED CHANGE, COMMENT OR SUGGEST:
Time	_____	_____	_____
Place	_____	_____	_____
Duration	_____	_____	_____
Format	_____	_____	_____
Leadership	_____	_____	_____
Participation	_____	_____	_____
Communications and exhange completed modules for critique from other sites	_____	_____	_____

12. Sense of accomplishment regarding:

	COMPLETE	PARTIAL	NONE
Being part of the ISSOE project	_____	_____	____
Pioneering in an innovative approach	_____	_____	____
Writing modules	_____	_____	____
Implementing the modules	_____	_____	____
Increased understanding of curriculum	_____	_____	____
Overall improvement of teaching skills	_____	_____	____

Please comment: _____

_____

D. Statewide Expansion

13. As a part of the ISSOE expansion, is a statewide exchange of completed modules and critique from various sites a viable system? _____Yes _____No

Please comment or suggest alternatives:_____

_____

_____

_____

14. Which one of the following activities would you recommend for a statewide expansion of the ISSOE approach?

Workshop _____
Weekly follow up _____
University and SED follow up _____
Other_____ _____

Please comment:_____

_____

_____

15. The role of the local curriculum coordinator, teacher's point of view:_____

_____

_____

_____

16. As a pioneer and experienced teacher in the ISSOE project, how confident do you feel in acting as a lead teacher to assist other teachers to change to the ISSOE approach?

Confident_____ Not Confident_____ Not Sure_____

If confident, at what level?

Local level _____
Regional level _____
State level _____

17. Was it necessary to change or rearrange your shop or classroom for the implementation of the ISSOE approach? _____Yes _____No

If yes, was it:

a slight change or rearrangement _____
moderate change or rearrangement _____
drastic change or rearrangement _____
other_____ _____

18. Does the ISSOE approach allow for rapid transition and adjustment for teachers utilizing previous approaches? _____Yes _____No

Please comment:_____

_____

19. Do you feel an exchange of modules for critique on a state wide level is apt to
increase validation? _____Yes _____No
updating? _____Yes _____No

Please comment:_____

_____

20. In your opinion, which one of the following is apt to bring a state wide curriculum change?

Teachers in the ISSOE Project	_____
Regional curriculum coordinators	_____
SED	_____
Universities (Cornell & others)	_____
Other_____	_____

21. Did you review the ISSOE approach with your advisory committee or trade council?
_____Yes _____No
Please comment:_____

_____

22. Do you use your advisory committee or trade council for validation? ____Yes _____No
updating? ____Yes _____No

Please comment:_____

_____

ISSOE

Checklist For Curriculum Coordinators

A. Curriculum coordinator's management tool

1. A) Rate the ISSOE approach regarding the following (scale 1-5,1=least,5=most)
   B) Please compare the following to previous experience
   C) Comment

	RATE A	RATE B	COMMENT
Your overall planning procedures relate to communication with your teachers	___	___	_____
Utilization of teacher's time	___	___	_____
Securing and organizaing supply and material	___	___	_____
Organization of shop and class-room	___	___	_____
Student learning activities	___	___	_____
Individual instruction	___	___	_____
Recordkeeping	___	___	_____
Managing customer service	___	___	_____
Evaluative instrument for student achievement	___	___	_____
A promotional tool for public information	___	___	_____
Other	___	___	_____

2. Does this system provide teachers feedback to you? YES___ NO___

   What are the ways to promote feedback? Please comment: _____
   (relate to the ISSOE approach)

   _____

   _____

3. Do you see your role in the local level as a backup support for teachers regarding the following:

a) Assist to adjust the modular curriculum package to meet students needs, including special students needs, handicapped students, bilingual students, illiterate students, etc.:
YES___ NO___ COMMENT_____

b) Assist teachers to adjust the curriculum package to shop or classroom setting:
YES___ NO___ COMMENT_____

c) Assist teachers with overall program planning:
YES___ NO___ COMMENT_____

d) Assist teachers with planning for needed supply and customer service:
YES___ NO___ COMMENT_____

e) Provide budgetary decisions to meet students needs:
YES___ NO___ COMMENT_____

f) Provide administration decisions regarding students:
YES___ NO___ COMMENT_____

g) Identify resources for teachers use:
YES___ NO___ COMMENT_____

h) Assist teachers in choosing mode of teaching:
YES___ NO___ COMMENT_____

i) Orientation of a new teacher:
YES___ NO___ COMMENT_____

j) Introduce teachers to modularized curriculum approach:
YES___ NO___ COMMENT_____

4. The student reporting system is:

a) Satisfactory _____
b) Satisfactory but time consuming _____
c) Too complicated _____
d) Needs improvements _____
e) Other _____ _____

Comment (and/or suggest improvements): _____

_____

_____

5. In order to maximize the effectiveness of the modularized curriculum instruction, what recommendations would you have regarding the following:

	Auto Mechanics	
	Open System	Traditional System
Class size:		
a) Optional number of students	_____	_____
b) Maximum number of students	_____	_____

Physical setting: (please check)

a) Open system ___
b) Traditional system ___
c) Other ___ Explain: _____

_____

_____

Mode of operation: (please check)

a) Work stations ___
b) Live work only ___
c) Combination of the two ___

B. Curriculum

6. Degree of satisfaction with the modules, and comments for improvements:

	IMPROVEMENT			
No. & Module	O.K.	Major	Minor	Comments
Auto Mechanics				
1. General safety	___	___	___	_____
2. Job opportunities & requirements	___	___	___	_____
3. Tools	___	___	___	_____
4. General auto service	___	___	___	_____
5. Brake system	___	___	___	_____
6. Suspension system	___	___	___	_____
7. Cooling system	___	___	___	_____
8. Fuel system	___	___	___	_____
9. Ignition system	___	___	___	_____
10. Exhaust system	___	___	___	_____
11. Lighting system	___	___	___	_____
12. Charging & starting system	___	___	___	_____
Office Training				
1. Adding machines	___	___	___	_____
2. Filing	___	___	___	_____
3. Office forms	___	___	___	_____
4. Payroll procedures	___	___	___	_____

7. The evaluation procedure is: (column 4 in the curriculum package)

a) Satisfactory ____
b) Satisfactory with some improvement ____
c) Complicated but useable ____
d) Not valid ____
e) Needs revision ____
f) Not needed at all ____
g) Other ____

Please comment: _____

_____

_____

8. In comparison to previous experiences, how would you rate the ISSOE approach as it affects students regarding the following (scale 1-5; 1=least; 5=most):

	ISSOE Approach	Previous Approach
a) Allows students to proceed at their own pace	_____	_____
b) Permits student recycling	_____	_____
c) Students cover more material	_____	_____
d) Students opportunity for specialization	_____	_____
e) Students understanding	_____	_____
f) Students motivation	_____	_____
g) Students achievement	_____	_____
h) Students independence	_____	_____
i) Students acceptance of responsibility	_____	_____
j) Other _____	_____	_____

Please comment: _____

_____

_____

9. Will you recommend your teachers to utilize the modules next year?

YES____ NO____ ALL____ PART____ If NO, go to Question 10.

No. & Module	YES	NO	ALL	PART	WHICH?
Auto Mechanics					
1. General safety					
2. Job opportunities & requirements					
3. Tools					
4. General suto service					
5. Brake system					
6. Suspension system					
7. Cooling system					
8. Fuel system					
9. Ignition system					
10. Exhaust system					
11. Lighting system					
12. Charging and starting system					
Office Training					
1. Adding machines					
2. Filing					
3. Office forms					
4. Payroll procedures					

10. Please rate the modules regarding its adaptability for individualized instruction. (Scale 1-5; 1=least; 5=most)

No. & Module	Rate	Comments:
Auto Mechancis		
1. General safety	____	_____
2. Job opportunities & requirements	____	_____
3. Tools	____	_____
4. General auto service	____	_____
5. Brake system	____	_____
6. Suspension	____	_____
7. Cooling system	____	_____
8. Fuel system	____	_____
9. Ignition system	____	_____
10. Exhaust system	____	_____
11. Lighting system	____	_____
12. Charging and starting system	____	_____
Office Training		
1. Adding machines	____	_____
2. Filing	____	_____
3. Office forms	____	_____
4. Payroll procedures	____	_____

C. Management ISSOE Project

11. Please rate the following agencies on a one to five scale regarding their effective involvement in the project and whether you would like to see their continuous or discontinuous involvement in a similar project in the future: (1=least effective; 5=most effective)

AGENCY	Rate	Continue	Discontinue	Added
a) SED	____	____	____	____
b) CIOE	____	____	____	____
c) RRI	____	____	____	____
d) Local administration curriculum coord. occ. ed. directors	____	____	____	____
e) Other_____	____	____	____	____

Please add additional comments regarding the above, if any: _____

_____

_____

12. Comment regarding the local and regional meetings of the ISSOE project:

	OK AS IS	NEED CHANGE	IF NEED CHANGE, COMMENT
a) Time	____	____	_____
b) Place	____	____	_____
c) Duration	____	____	_____
d) Format	____	____	_____
e) Leadership	____	____	_____
f) Participation	____	____	_____
g) Communications and exchange completed modules for critique from other sites	____	____	_____

13. Sense of accomplishment regarding:

	COMPLETE	PARTIAL	NONE
a) Being part of the ISSOE project	___	___	___
b) Pioneering in an innovative approach	___	___	___
c) Implementing the modules in a supervisory role	___	___	___
d) Increased understanding of curriculum management	___	___	___

e) Please comment: _____

_____

14. Would you recommend your occupational education director to continue the ISSOE approach next year?

a) Without monetary committment of SED? YES___ NO___
b) With the same mode as the program initiated? YES___ NO___
c) Without Sed, CIOE, RRI (circle appropriate)?
d) Without outside agency but with regional coordinator (or self)? YES___ NO___
e) Other (suggest) _____

D. Statewide Expansion

15. As a part of the ISSOE expansion, is a statewide exchange of completed modules for critique from various sites a viable system: YES___ NO___

Please comment or suggest alternatives: _____

_____

16. Which one of the following activities would you recommend for a statewide expansion of the ISSOE approach?

a) Workshop ___
b) Weekly follow up ___
c) University and SED follow up ___
d) Other _____

Please comment: _____

_____

17. How do you view the role of curriculum coordinator on a local and regional level in a statewide effort? _____

_____

18. Would you suggest strategies for a statewide curriculum change. _____

_____

19. As a pioneer and experienced curriculum coordinator in the ISSOE project, how confident do you feel in acting as a lead person to assist other teachers and curriculum coordinators to adapt the ISSOE approach?

Confident___ Not confident___ Not sure___

If confident, at what level?

Local level _____
Regional level _____
State level _____

20. Was it necessary for teachers to change or rearrange shop or classroom for the implementation of the ISSOE approach? YES___ NO___

If yes, was it:

a) A slight change or rearrangement _____
b) Moderate change or rearrangement _____
c) Drastic change or rearrangement _____
d) Other _____ _____

21. Does the ISSOE approach allow for rapid transition and adjustment for teachers and curriculum corrdinators utilizing previous approaches?

Teachers YES___ NO___ Curriculum coordinators YES___ NO___

Please comment: _____

_____

22. Do you feel an exchange of modules for critique on a statewide level is apt to increase validation? YES___ NO___ Updating? YES___ NO___

23. In your opinion, which one of the following is apt to bring a statewide curriculum change?

a) Teachers in the ISSOE project _____
b) Regional curriculum coordinators _____
c) SED _____
d) Universities (Cornell & others) _____
e) Other _____ _____

24. In your opinion, what is the role of the universities, SED, and other agencies in a statewide curriculum change. _____

_____

_____

ISSOE

CHECKLIST FOR OCCUPATIONAL EDUCATION DIRECTORS

1. A. In implementing any vocational program, what information regarding program decisions does an administrator in your situation need to obtain? Please check the appropriate spaces in Column A.

   B. Please indicate what priority each item has in your decision making process. Using a scale of 1 to 4 in Column B (1-is the lowest priority level, 4-is the highest priority level), designate the priority of each item you have checked in Column A.

	A	B
1) Cost analysis	___	___
2) How program affects students	___	___
3) The status of student progress	___	___
4) The major changes in the physical setting that are necessary for the implementation of the program	___	___
5) The need of special orientation for teachers	___	___
6) Staff development related to the program	___	___
7) The Occupational Education Directors time directly related to the program	___	___
8) Available outside resources to be utilized in the program	___	___
9) Public reaction to the program	___	___
10) Community input (trade councils)	___	___
11) Ease of interpretation of program to parents and students	___	___
12) Other_____	___	___

2. Please rate on a 1-5 scale, (1-least adequate, 5-most adequate) how adequate is the information you collect under the old system in regard to:

1) Cost analysis	___
2) How program affects students	___
3) The status of student progress	___
4) The major changes in the physical setting that are necessary for the implementation of the program	___
5) The need of special orientation for teachers	___
6) Staff development related to the program	___
7) The Occupational Education Directors time directly related to the program	___
8) Available outside resources to be utilized in the program	___
9) Public reaction to the program	___
10) Community input (trade councils)	___
11) Ease of interpretation of program to parents and students	___
12) Other_____	___

3. A. What is the potential for collecting this information through the ISSOE system? Please rate on 1-5 scale.

   B. Please check the information you were able to get up to this point from the ISSOE approach in regard to:

	A	B
1) Cost analysis	___	___
2) How program affects students	___	___
3) The status of student progress	___	___
4) The major changes in the physical setting that are necessary for the implementation of the program	___	___
5) The need of special orientation for teachers	___	___
6) Staff development related to the program	___	___
7) The Occupational Education Directors time directly related to the program	___	___
8) Available outside resources to be utilized in the program	___	___
9) Public reaction to the program	___	___
10) Community input (trade councils)	___	___
11) Ease of interpretation of program to parents and students	___	___
12) Other_____	___	___

4. Would you consider sharing your curriculum coordinator as a lead person in assisting other school districts to change to the ISSOE approach?

YES_____ NO_____ NOT SURE_____

A. If yes, please check at what capacity:
Local_____
Regional_____
Statewide_____

B. Please check the appropriate:
At local expense?_____
At SED expense?_____
At a shared cost basis?_____

5. How can you continue the ISSOE approach in your locale next year?

A. Without monetary committment of SED: YES____ NO____
B. With the same mode as the program initiated: YES____ NO____
C. Without SED, CIOE, RRI: (circle appropriate) YES____ NO____
D. Without outside agency but with regional coordinator: YES____ NO____
E. Other: (suggest)_____

6. Will the ISSOE modular approach assist the Occupational Education Director in making program decisions appropriate at his level regarding the following:

A. To continue a program: YES___ NO___ COMMENT:_____

_____

_____

B. To terminate a program: YES___ NO___ COMMENT:_____

_____

_____

C. To give a program priority for resource allocation: YES___ NO___

COMMENT:_____

_____

D. To plan professional development activities? YES___ NO___ COMMENT:___

_____

_____

E. To make advisory committee and trade councils more effecitve? YES___

NO___ COMMENT:_____

_____

F. To interpret programs to parents, prospective students, employers, and other publics? YES___ NO___ COMMENT:_____

_____

_____

G. Etc.? YES___ NO___ COMMENT:_____

_____

_____

7. Do you feel you are adequately informed about the ISSOE project? YES___ NO___

   A. If yes, by which communication channels were you informed?

   1) Your local curriculum coordinator _____
   2) Your teachers involved in the ISSOE project _____
   3) CIOE personnel _____
   4) SED personnel _____
   5) RRI personnel _____
   6) Other_____ _____

   B. Please indicate on a rating scale of 1-5 from which communication channel you were most informed.

   1) Your local curriculum coordinator _____
   2) Your teachers involved in the ISSOE project _____
   3) CIOE personnel _____
   4) SED personnel _____
   5) RRI personnel _____
   6) Other_____ _____

8. Additional comments, if any._____

_____

_____

_____

_____

_____

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